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PRELIMINARY ASSESSMENT

Date: October 31, 1988

Prepared By: Dick Jones and Arun Roy
California Department of Health Services
Toxic Substances Control Division
North Coast California Section

Site Name: Staefa Control Systems
2481 San Leandro Blvd.
San Leandro, CA

EPA ID No.: CAD 982400228 *

ASPIS No.: 01-36-0094

INITIAL DHS CONCLUSIONS AND RECOMMENDATIONS FOR FURTHER ACTION:

Site Description:

The Staefa Control Systems (Staefa) site is located at 2481 San Leandro Boulevard, in San Leandro Valley, about three miles east of San Francisco Bay. The site is 1.4 acres (2a) and has latitude 37/43/30.0 and longitude 122/09/30.0. One single-story, 8000 square foot building constructed in the 1940's, with a newer attached warehouse, exists at the site (1).

The facility was in use until mid-1987 for the assembly of thermostats, air probes and other control system components, when the entire operation was moved to San Diego. With the exception of small quantities of paint and alcohol, no hazardous substances were used on the site. The facility has been vacant ever since the move and is currently undergoing sales negotiations (1,5). The site came to the attention of the Department of Health Services (the Department) as a result of a report submitted to the Department by the current property owners. This report documented groundwater contamination by various solvents in on-site monitoring wells (1).

Universal Pneumatic Controls (UPC) acquired the property from Singer in July 1976 (2). UPC was later bought out by Staefa Control Systems, although UPC is still on the 1988-89 Assessor's list (2a). Staefa has been the owner of record from 1978 to present (1).

Prior to 1976, the property was a part of the holdings of Singer Company, also known as Singer-Friden. On site, Singer-Friden repaired electrical equipment, using rewiring and soldering, but no hazardous substances (1). The site was sold by Singer-Friden in July, 1976 (1).



BASE MAP REF: U.S.G.S. 7.5 MINUTE TOPOGRAPHIC QUADRANGLE, SAN LEANDRO,
CALIFORNIA, PHOTOREVISED 1980

SCALE: 1" = 2000'

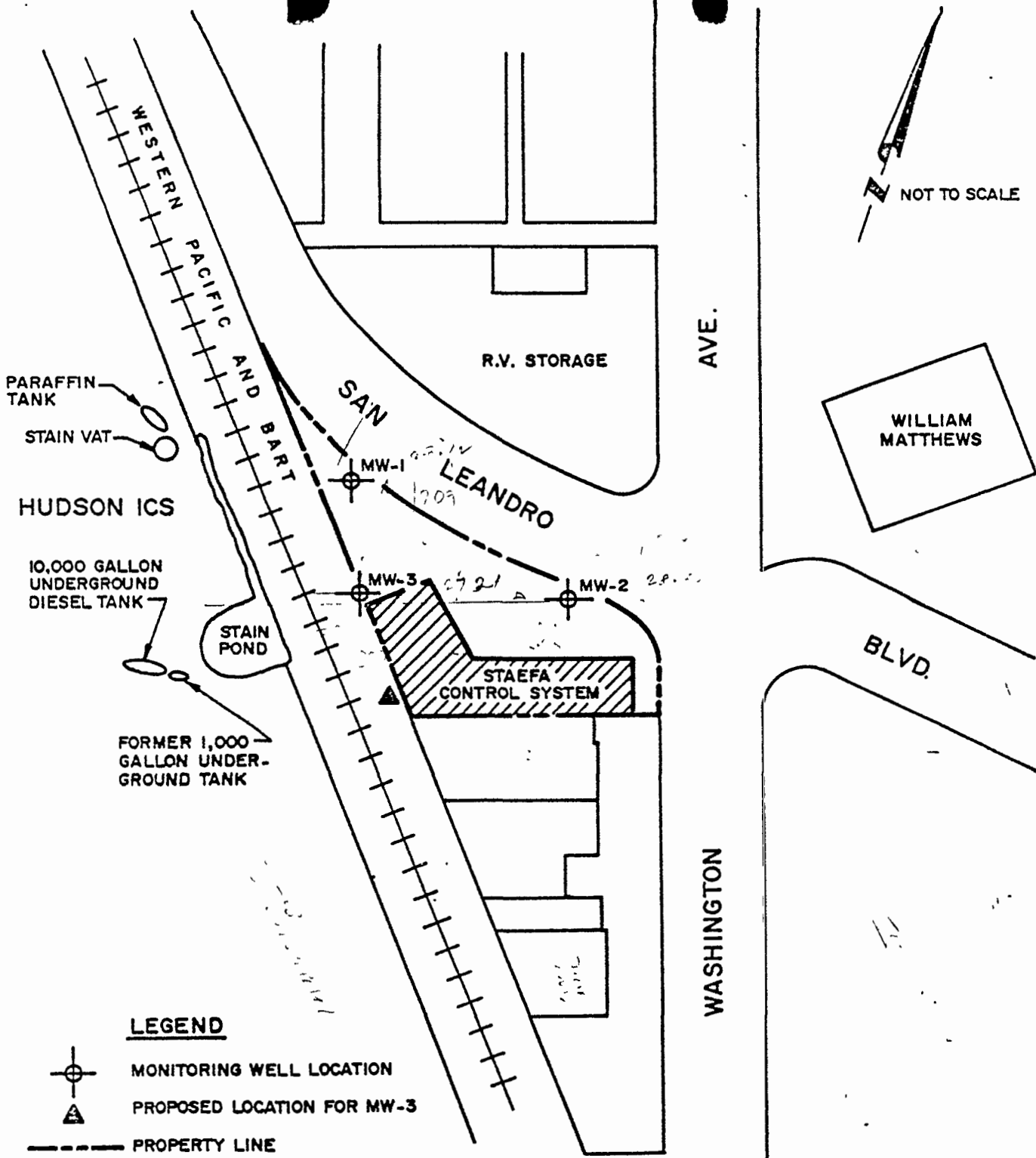
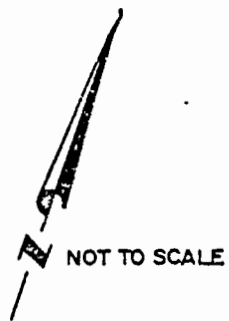
Beta Associates

LOCATION MAP

STAEFA CONTROL SYSTEM
SAN LEANDRO, CALIFORNIA

FIGURE
1

DEC. 1987
202-1.1



Beta Associates

SITE PLAN

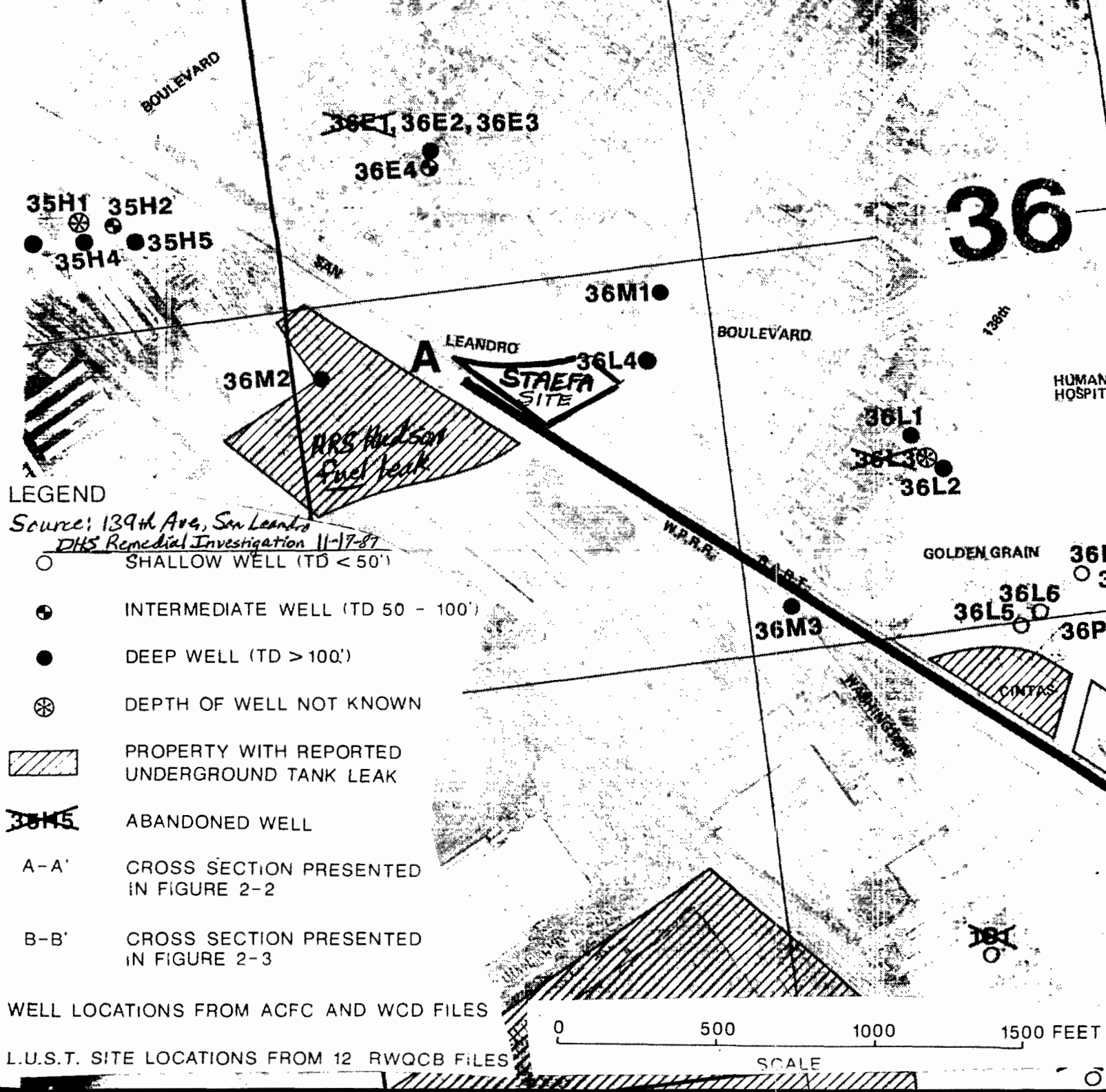
STA-EFA CONTROL SYSTEM
SAN LEANDRO, CALIFORNIA

FIGURE
2

DEC. 1987
202-1.1

WELL LOCATIONS AND REPORTED LEAKING UNDERGROUND STORAGE TANK SITES NEAR THE STAEFA CONTROL SYSTEM SITE SAN LEANDRO, CALIFORNIA

FIGURE 3



CONTACT REPORT

AGENCY: Alameda County Public Works

ADDRESS: Oakland, CA

PERSON

CONTACTED: Calvin Hickenbottom

PHONE NO.: (415) 670-5480

FROM: Dick Jones

TO: File

DATE: 8-16-88

SUBJECT: Groundwater Use in Staefa site area

CC:

I told Mr. Hickenbottom that we were doing potential hazardous waste site assessments and needed information about groundwater use and municipal wells in the San Leandro - Hayward area. He said most water was imported in this area. Exceptions are the Alameda Water District serving Fremont and Union City, (which uses groundwater to recharge the aqueduct water), a very few domestic systems and only three or four small systems in unincorporated areas (Morland in Hayward and Trailer Haven in San Lorenzo, 160 hookups).

San Leandro is served by the East Bay Municipal Utility District which imports and blends its water. (Historically, there was a well off of Davis St. in San Leandro). West Hayward gets its water from the City of San Francisco's Hetch Hetchy Reservoir supply. However, Hayward used groundwater until 1962 and was again considering its use in an emergency.

Apparent Problem:

The site came to the attention of the Department as a result of a report on groundwater contamination submitted to the Department by the current property owners. The report summarized a series of site investigations conducted during the course of a prospective sale of the site to P.M. Cedar Products (1).

In September 1987, an initial inspection was conducted by Staefa's consultants at the site. During November 1987, the first phase of soil and ground water investigation was started. All samples were tested for the presence of volatile organics, total petroleum hydrocarbons, and heavy metals; MW-3 was also tested for base/neutral acids, pesticides, and PCBs. Soil and groundwater samples near the northwest edge of the site showed the presence of PCE (tetrachloroethene), TCE (trichloroethylene) and Cis-1,2 dichloroethene. Trace concentrations of heavy metals were found in all of the soil and ground water samples (1).

The concentrations of the three compounds of greatest concern are as follows (1):

Compound	Soil Concentration (ppb)			Ground Water Concentration (ppb)			State Applied Action Level (ppb)
	*DH#1	DH#2	DH#3	*MW#1	MW#2	MW#3	
Trichloro-ethylene (TCE)	235	2.7	22.3	222	6.9	397	5
Tetrachloro-ethene (PCE)	1360	48.3	200	209	12.6	228	4.0
Trans-1,2 Dichloro-ethene (CIS-1, 2 DCE)				60.4		47.3	16.0

* DH denotes dry hole; MW denotes monitoring well.
 All soil samples are at 3.5 feet. Soil and groundwater samples taken at same locations. All locations are off the site.

The contaminated wells MW#1 and MW#3 are near the site's northwest corner. Since all sampling was conducted at a depth of 3.5 feet, contaminant variation with depth is not available (1).

Staefa Control Systems used the site for the assembly of thermostats, air probes and other control system components. According to their consultant, Staefa's operation did not involve the use or generation of any of the contaminants discovered in the soil and/or ground water (1,1a).

Several light industrial facilities sources previously operated on or near the site: Singer Friden (1940-1976), both onsite and across the street 300 yards northeast, HRS Hudson (with underground tanks) to the west, and InterCoastal Paint, just north until 1962. These facilities represent potential sources for the contamination of the groundwater.

On site, Singer Friden repaired electrical equipment, using rewiring and soldering, but no halocarbon solvents. Across the street, 300 yards northeast, at 2450 Washington Ave., Singer Friden etched and stripped printed circuit boards (using TCE, acids, cyanide and oils), performed cadmium and nickel plating (using TCE), painting (thinners), and machining (with TCE and TCA). The waste TCE was reportedly disposed in the sewer (1,1a).

Inter-Coastal Paint Corporation (ICP) operated north of the site, where San Leandro Boulevard is now. A major explosion destroyed this plant in 1962. ICP used and stored hexane, naphtha mineral spirits and Standard Oil #200 solvent, at the north end of their facility (1a).

Staefa's consultants have concluded that the source of the ground water contamination may be the former Singer Friden properties offsite (1,1a). However, the distance and the relatively low levels of contamination in the well (MW-2) closest to the street may moderate Singer Friden's potential as a source.

There are two other groundwater halocarbon sites in the vicinity, 139th Avenue 1/3 mile south, and Factor Avenue/I-880 1/2 mile southeast. Both are on the Department's Expenditure Plan and thus are the focus of ongoing investigations.

HRS Factors:

Observed Release:

There has not been an observed release to ground-water, surface water, or air. The existing ground-water contamination does not appear to be attributable to the site. There was no known past use or disposal of solvents at the facility. Although there is no upgradient monitoring, there are a number of potential sources including InterCoastal Paint and Singer-Friden.

Direct Contact/Fire and Explosion:

There is no known threat of direct contact or fire/explosion. The site is paved with asphalt-concrete. Although there is no fence around the site, direct contact with the subsurface contaminants and/or fire and explosion are both, therefore, unlikely (5). An explosion at ICP just north of the site did occur in 1962 (1a).

Waste Type/Waste Quantity:

The facility assembled and repaired electrical equipment. With the exception of small quantities of paint and alcohol, no hazardous substances were used on it. The primary hazardous substances found in soil and groundwater are the volatile halocarbons trichloroethylene (TCE) and tetrachloroethylene (PCE). Since these substances were not used onsite, the exact quantity of waste is unknown (1).

Ground Water:

Few people are potentially affected by the site's shallow groundwater, since most drinking water is imported. Although the nearest producing domestic well is less than two thousand feet northeast of the site at the Trailer Haven Auto Court, it is in the deep aquifer. The 160 Auto Court hookups are served by a 290 foot, 75 gallon/minute, F1 well (1a).

Nearby well log data show the Newark and Centerville aquifers at depths of 35-40 feet, 170-200 feet, and 260-280 feet, and the Fremont aquifer at 420 feet (1). Although clay layers separate the aquifers, there is probably interconnection, if only via the recharge zone in the hills one mile to the east. The regional ground water flow direction is southwest, although it can be changed by local pumping (1,8). The net November-April precipitation is 7.3 inches/year (6).

Most of the drinking water for domestic and industrial use in San Leandro is currently supplied by the East Bay Municipal Utility District (EBMUD), collected from the Delta and the Sierras (1). Alameda County Public Work Agency's (ACPWA) inventory of existing wells, however, shows the existence of 368 wells listed in all categories of usage, e.g., domestic, irrigation, monitoring, etc., within a three mile radius of the site. Most of these wells are for irrigation, but there are 45 domestic wells of unknown use within three miles and six within one mile. Some of the well perforations are less than 40 feet deep. If all the wells were producing, the maximum population served within three miles would be 655. This assumes 3.8 per domestic well and 1.5 per acre irrigation well. However, most of the wells are listed as nonproducing (3).

The nearest wells to the site are two 100 foot wells, L4 and M1, just across Washington Ave. L4 is an irrigation well and M1 is an old domestic well; Both are upgradient and nonproducing (3). Also, a water supply well at Singer Friden supplied all of the plant's water until 1976 (1a).

Surface Water:

There is no known potential for contamination of surface water as a result of runoff from this site. The site is paved, has minimal surface soil contamination, and is flat (5). The end of the flood control canal leading to San Francisco Bay is about 1-3/4 miles to the southwest. The Bay is used for recreation, fishing, spawning and waterfowl habitat. The nearest surface water is San Leandro Creek about 1-1/4 mile to the north (Figure 1). The one year 24 hour rainfall is 2-3 inches (6a).

Other Factors:

The site is located in an area undergoing transformation from industrial to retail/office space and residential redevelopment. Public facilities such as schools, one-third mile northeast, and a hospital are in close vicinity (3). Population within a three mile radius is 120,000 (4).

There are two other sites in the vicinity with TCE contamination in groundwater, Factor Ave./I-880 and 139th Ave./Washington Ave. Both are on the State's Expenditure Plan List, have unknown sources of contamination, and are probably unrelated to the Staefa site.

Draft Revised HRS Considerations:

There are no environmentally sensitive areas near the site. There is a slight chance for contamination of the food chain if the nearby irrigation well is for food crops; However, the crops irrigated are unknown. Air releases are not a problem from the contaminated groundwater 28 feet deep.

Other Regulatory Involvement:

DHS is the lead agency and neither the San Francisco Regional Water Quality Control Board nor the Alameda County Department of Environmental Health had files on Staefa.

Conclusion/Recommendations:

There has been no observed release at the Staefa Control Systems Site. Contaminants are present in the ground water at concentrations above State action levels. The source and extent of the contamination is still unknown, although Singer-Friden and Inter-Coastal Paint are potential sources (1a). Further investigation would provide the necessary information to define and locate the source either on or offsite. The lack of targets for the shallow on-site contamination means there is no on-site threat to public health. Impacts from potential offsite sources such as Singer-Friden are being investigated by DHS.

EPA Recommendation: No Further Action

The site is recommended for no further action. There is no observed release to groundwater, surface water or air. Since the halocarbons found were not used by the site occupants, the groundwater contamination is not attributable to this site. There are few, if any, targets for the shallow groundwater. Therefore, although there is a groundwater problem, the site probably does not pose a threat to public health. A preliminary screening indicates the site would not qualify for inclusion on the National Priorities List. Thus, no further action by EPA is necessary.

DHS Recommendation: Site Inspection, Medium Priority

Confirmation of the source of the chlorinated solvents in the groundwater would enable their control and eventual cleanup. There is not currently a threat to public health from the on-site shallow groundwater. However, the proximity of the offsite potential TCE source, Singer-Friden, to the currently used Trailer Haven well mandates further investigation. Thus, a state site inspection of medium priority is recommended.

The site investigation should focus on the source of the groundwater halocarbons, particularly the former Singer-Friden plant. This investigation should be conducted in conjunction with activities at the 139th Avenue site. Monitoring of drinking water wells at the trailer court is being initiated by DHS contractors.

REFERENCES

1. Beta Associates - Subsurface Soil and Ground Water Contamination Investigation Report dated February 12, 1988.
- 1a. Environmental Assessment, 2481 Washington Ave., Harding Lawson Associates, 10-3-88.
2. Assessor's Office Contact Log, Alameda County - Chronology of Ownership, 4-8-88.
2a. Assessor's map and ownership information, TRW, 1988-89.
3. Public Works Agency - Alameda County - Well Inventory.
3a. Contact Log, Calvin Hickenbottom: San Leandro water imported, 8-16-88.
4. Bay Area Association of Government's 1987 Population Data, (stored on diskette at DoHS Region 2 Site Evaluation Program Office)
5. Drive-By Inspection, 4/1/88.
6. Climatic Atlas.
- 6a. Ecology and Environment Preliminary Assessment Guidance Manual, 1988-89.
7. Preliminary Assessment - Peterson Tractor Company, Janet Naito, 3-3-88.

PRELIMINARY ASSESSMENT CONTACT LOG

Facility Name: Staefa Control System, San Leandro

Facility ID:

Name	Affiliation	Phone	Date	Information
Steve Hunter	Assessor's Alameda Cnty	(415) 272-3727	4/08/88	Property was sold to Universal Pneumatic Cntrls in July 1976 by Singer-Fr prior owner-City of San Leandro, 1963
Lester Feldman	RWQCB	(415) 464-1255	4/08/88	No files fnd
Tom Peacock	Env. Hlth. Agency Alam. Cnty.	(415) 874-7237	4/12/88	No files fnd
Calvin Hickenbottom	Alameda Cnty Public Works	(415) 670-5480	8/16/88	Few munic. wells, water imported

CONTACT REPORT

AGENCY: Alameda County Assessor's Office

ADDRESS: Oak St., Oakland, CA

PERSON

CONTACTED: Steven Hunter

PHONE NO.: (415) 272-3727

FROM: Arun Roy

TO: File

DATE: 4-8-88

SUBJECT: Ownership History

CC:

I called the Assessor's Office and reached Mr. Hunter and asked him about the Staefa Control System's site. He said the property was sold to Universal Pneumatic Controls in 1976 by Singer-Friden. The prior owner was the City of San Leandro, since 1963.

CONTACT REPORT

AGENCY: San Francisco Regional Water Quality Control Board

ADDRESS: 1111 Jackson St., Oakland

PERSON

CONTACTED: Lester Feldman

PHONE NO.: 415 464-1255

FROM: Arun Roy

TO: File

DATE: 4-8-88

SUBJECT: Staefa site file

cc:

I asked Mr. Feldman if there were any files on the subject site; he said there were none.

CONTACT REPORT

AGENCY: Alameda County Environmental Health Agency

ADDRESS: 470 27th St., Oakland, CA

PERSON

CONTACTED: Tom Peacock

PHONE NO.: (415) 874-7237

FROM: Arun Roy

TO: File

DATE: 4-12-88

SUBJECT: Staefa site file

cc:

I asked Mr. Peacock if there was a file on the subject site and he replied there was none.

FIELD PHOTOGRAPHY LOG SHEET

DATE 2-2-88

TIME 1:00 A.M. (P.M.)

DIRECTION: N NNE NE ENE
E ESE SE SSE
S SSW SW WSW
(W) WWW NW NNW

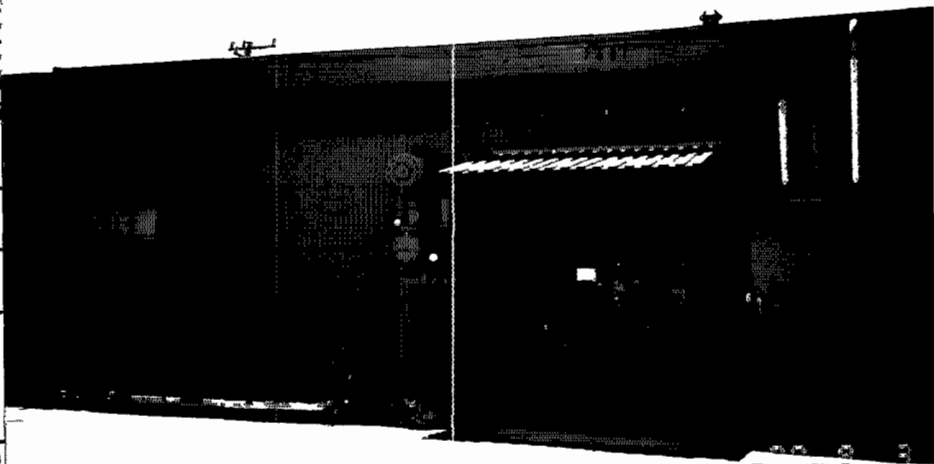
WEATHER clear

SITE Staeta

PHOTOGRAPHED BY:

Cindy Becker
SAMPLE ID # (IF APPLICABLE)

DESCRIPTION: Staeta front entrance



DATE 2-3-88

TIME 1:00 A.M. (P.M.)

DIRECTION: N NNE NE ENE
E ESE SE SSE
S SSW SW WSW
(W) WWW NW NNW

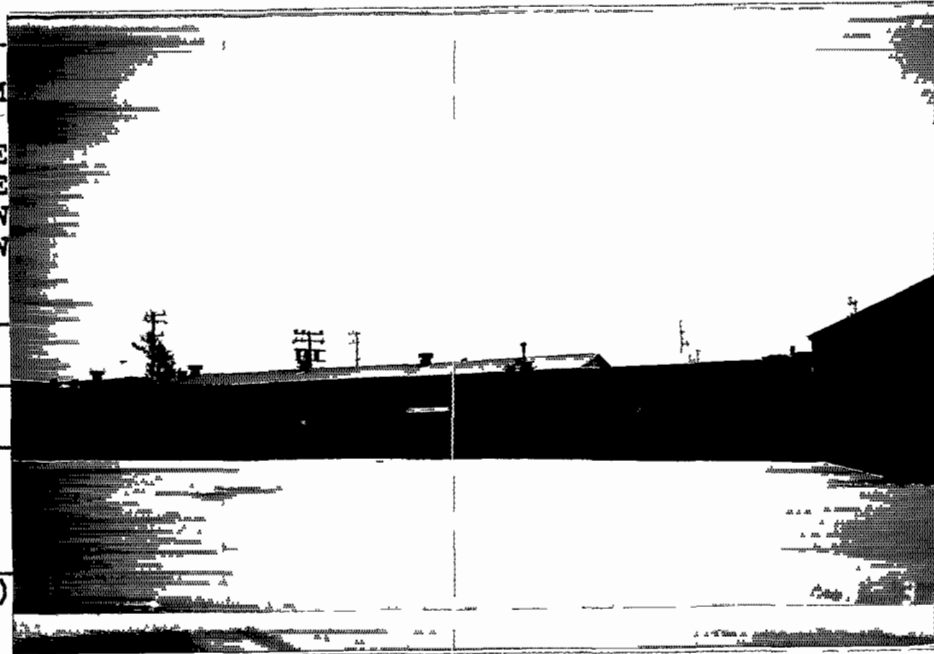
WEATHER clear

SITE Staeta

PHOTOGRAPHED BY:

Cindy Becker
SAMPLE ID # (IF APPLICABLE)

DESCRIPTION: Staeta front yard



FIELD PHOTOGRAPHY LOG SHEET

DATE 8-3-88

TIME 1:00 A.M. (P.M.)

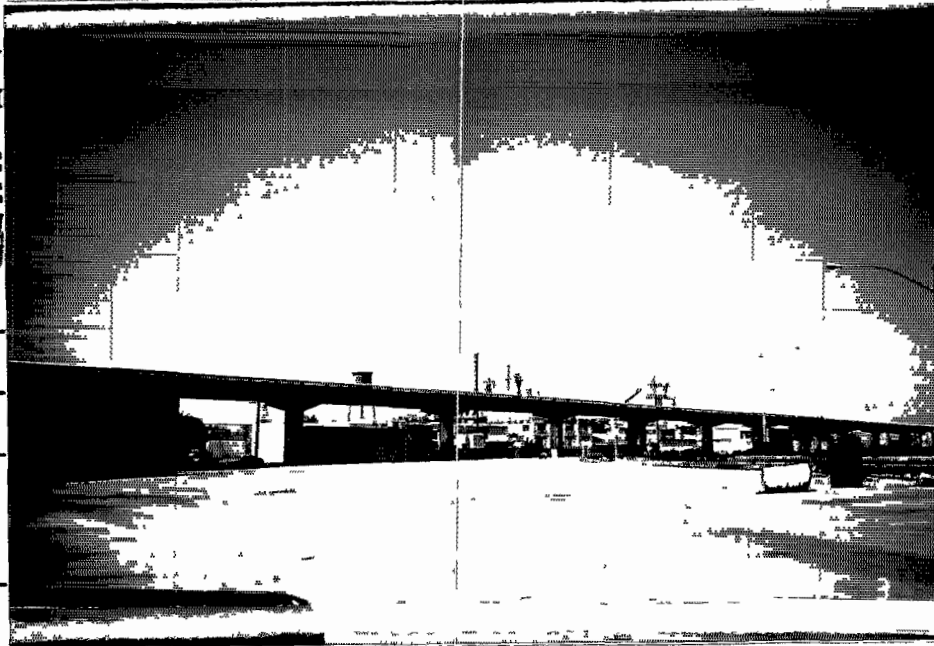
DIRECTION: N NNE NE ENE
E ESE SE SSE
S SSW SW WSW
W WWW NW NNW

WEATHER clear

SITE Staefa

PHOTOGRAPHED BY:

Sandy Beecher
SAMPLE ID # (IF APPLICABLE)



DESCRIPTION: Staefa paved area near BART tracks.

DATE 8-3-88

TIME 1:00 A.M. (P.M.)

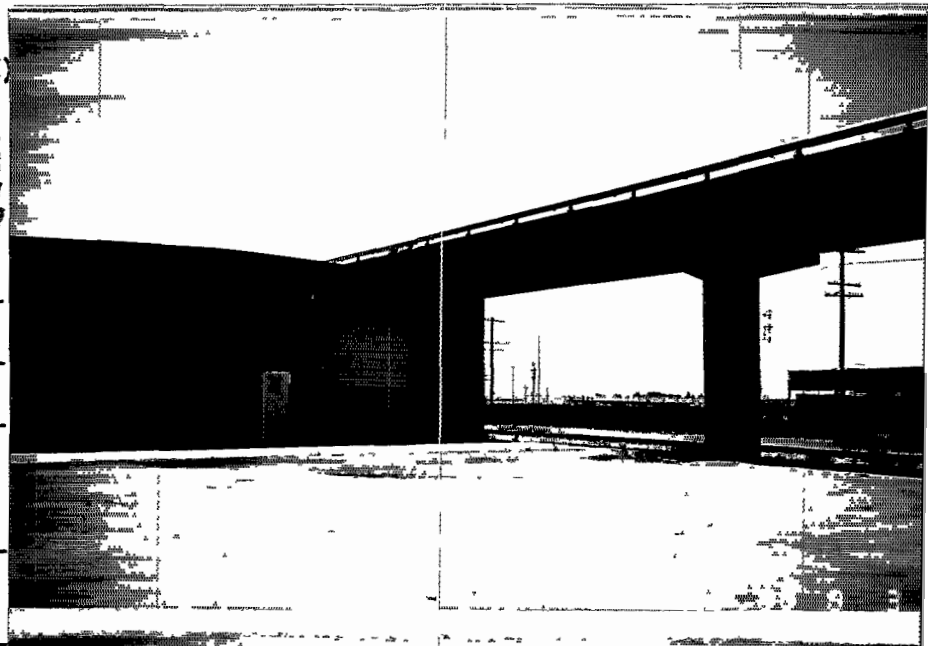
DIRECTION: N NNE NE ENE
E ESE SE SSE
S SSW SW WSW
W WWW NW NNW

WEATHER clear

SITE Staefa

PHOTOGRAPHED BY:

Sandy Beecher
SAMPLE ID # (IF APPLICABLE)



DESCRIPTION: Staefa paved area near BART tracks

REFERENCES

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1. Beta Associates - Subsurface Soil and Ground Water Contamination Investigation Report dated February 12, 1988.
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6. Climatic Atlas.
- 6a. Ecology and Environment Preliminary Assessment Guidance Manual, 1988-89.
7. Preliminary Assessment - Peterson Tractor Company, Janet Naito, 3-3-88.

REFERENCE |



Beta Associates

Consultants in Waste Management, Environmental Control and the Geotechnical Sciences

February 12, 1988
Project 202-1.1

Staefa Control System Inc.
8515 Miralani Drive
P.O. Box 269019
San Diego, California 92126

Attention: Mr. Espi Sanjana

Subject: Subsurface Soil and Ground Water
Contamination Investigation
Staefa Control System
2481 Washington Avenue
San Leandro, California

Gentlemen:

This report contains details of our Phase I contamination investigation of soil and ground water performed at the Staefa Control System facility in San Leandro, California. These details consist of the initial site inspection, Phase I of the field investigation, results of chemical analyses performed on selected soil and ground water samples, and conclusions and recommendations based on our findings.

Site Description

The subject site, located at 2481 Washington Avenue in San Leandro, is situated in San Leandro Valley, about three miles east of San Francisco Bay (see Figure 1, Location Map). One building, with a recently constructed warehouse attached, exists on-site and is used for the assembly of thermostats, air probes, and other small pneumatic controls (see Figure 2, Site Plan).

Areal Hydrogeology

The subject site is located north of the Niles ground water subarea. The Niles subarea is bounded on the north by the San Leandro Cone, which contains a water-bearing sequence that ranges in thickness from about 400 feet at the hillfront to as much as 1000 feet beneath the Bay Plain. The cone includes all of the area underlain by the alluvial fan of San Leandro Creek as well as portions of the Bay Plain underlain by alluvial materials derived from this creek.

The San Leandro Cone is divided into an upper and lower zone. The upper zone includes the water-bearing sequence to a depth of 400 feet. The alluvium in the upper zone contains two main aquifers, each consisting of

discontinuous beds of fine gravel. Generally, the upper aquifer is at a depth of about 60 feet and is equivalent to the Newark aquifer in the Niles subarea. The lower aquifer is, generally, at a depth of about 250 feet and is equivalent to the Centerville aquifer in the Niles subarea. An extensive, thick clay aquiclude separates the upper aquifer from the lower aquifer and largely protects the lower aquifer from saline water contained in the upper aquifer. These two aquifers in the San Leandro Cone are separated from the Newark and Centerville aquifers in the Niles subarea by fine-grained zones.

Well log data from an area near the intersection of Highway 880 and Lewelling Boulevard in San Leandro reveals the perched ground water table to be at a depth of approximately 15 feet below ground surface, with the equivalent to the Newark aquifer to be at a depth of about 35 feet to 40 feet below ground surface. The equivalent to the Centerville aquifer is divided into two portions. The upper portion occurs at a depth from about 170 feet to 200 feet below ground surface, and the lower portion occurs from 260 feet to 290 feet below ground surface. The equivalent to the Fremont aquifer occurs at a depth of about 420 feet, with a deeper aquifer occurring at approximately 480 feet to 500 feet below ground surface.

Although ground water appears to be present in sufficient quantities in this aquifer system, all water provided for domestic and industrial purposes in San Leandro is imported by the East Bay Municipal Utilities District from the Delta and the Sierras. There are, however, numerous old private wells in the area of the subject site. The data base from the Alameda County Public Works shows numerous shallow wells used for irrigation and domestic purposes within a one-mile radius of the subject site. Depths on these wells range from 15 feet to 80 feet, with the majority being approximately 30 feet to 40 feet deep. Numerous deeper wells used for industrial and irrigation purposes also exist within this same one-mile radius.

Site Inspection

On September 24, 1987, Dames and Moore conducted an inspection of the subject site and surrounding area to locate potential sources of contamination. Likewise, on November 13, 1987, Beta Associates conducted a similar inspection to assess the potential for subsurface soil and ground water contamination from operations formerly performed at the site as well as from past operations in the area. The site inspections were performed with the assistance of Mr. John Morris and Mr. Ray Gougler of Staefa Control System.

The main operations building on site was constructed in the mid-1940s with a warehouse added on to the west end of the building in 1980. The site was occupied until 1976 by Singer-Friden, a company that serviced electronic equipment. Reportedly, repair of the equipment consisted of rewiring and soldering; no chemicals were ever used while Singer-Friden occupied the

building (Morris, 1987). An above-ground oil storage tank was once located at the southwest portion of the property. However, construction of the warehouse prevented us from determining whether or not a surface spill had occurred. Since 1976, the site has been occupied by Staefa Control System and used for the assembly of thermostats, air probes, and other pneumatic controls for heating, ventilation, and air conditioning systems. No parts fabrication was performed on site. All equipment used for assembling the controls was powered by electricity or compressed air. With the exception of small quantities of paint and alcohol, which were stored in an approved chemical storage cabinet when not in use, no chemicals were used on site.

Existing potential sources for contamination in the vicinity of the subject site consist of Hudson ICS (a pencil manufacturing company) to the west and James Auto/Truck Service (a repair shop) to the north. Hudson ICS uses underground fuel tanks on site and also operates an open-air holding pond for red dye and paraffin, by-products generated from the pencil manufacturing process. James Auto/Truck Service, as well as other auto repair facilities, commonly uses petroleum products and solvents in their day-to-day operation. Much of the area around the site has been redeveloped into retail/office space and residential communities. Historically, however, past operations in the area consisted of anodizing metal parts, manufacturing hydraulic lifts, paint manufacturing, and electroplating processes (Dames and Moore, October 23, 1987 report for P & M Cedar Products). The William Mathews building, located at 2450 Washington Avenue (NE corner of Washington Avenue and San Leandro Boulevard), was formerly occupied by the Singer-Friden Company for engineering and administrative purposes. The lot immediately north of this building, now redeveloped into a condominium complex, was also occupied by Singer-Friden for manufacturing purposes. A telephone conversation with Mr. Al Foster (former maintenance supervisor for Singer-Friden) revealed the building that once occupied this lot was used for cadmium and nickel plating, blackening, and anodizing of machined parts for mechanical calculators. Some printed circuit boards were also manufactured on site. Mr. Foster further stated that trichloroethylene (TCE), cyanide, and oils were used and stored on site. He said that all waste oils were contained and transported to a recycler or to an approved disposal site; all other waste chemicals, including TCE, were discharged to the city sanitary sewer system. According to Mr. Foster, the City of San Leandro tested the waste liquids on a weekly basis prior to discharge, however, whether the discharge was permitted with the State Department of Health Services or the Regional Water Quality Control Board, or if any waste chemicals were ever discharged before being tested, is unknown. Mr. Foster was unaware of the tests the City of San Leandro performed on the waste liquids. Mr. Jerry Moothard (former production control/industrial engineer for Singer-Friden) and Mr. John Morris (former employee for Singer-Friden) added that chromic acid, hydrochloric acid, and cyanide were used in Singer-Friden's etching processes and that TCE and PCE (tetrachloroethene) were used as cleaning agents to strip residues off the machined parts to be plated, further stating that these chemicals were discharged to the sanitary

sewer system (Mr. Espi Sanjana, verbal communication). Currently, the areas in the vicinity of 139th Avenue/Washington Avenue and Factor Avenue/Highway 880 are subjects of ground water contamination investigations being conducted by the State Department of Health Services. To date, the source(s) of the ground water contamination in these areas has not been identified.

Description of Field Investigation

On November 25, 1987, a Phase I contamination investigation commenced at the subject site to determine whether the soil and ground water beneath the site had been contaminated due to site usage or from an off site source. Prior to any subsurface exploration, all well construction permits were filed with the Alameda County Flood Control and Water Conservation District, and all underground utilities were located by a professional locator service to avoid damage and to ensure safety while drilling.

Three exploratory borings were drilled on site (see Figure 2, Site Plan). Drill hole 3 (MW-3) was initially scheduled to be drilled closer to the southwest corner of the warehouse to determine the quality of ground water in the down-ground water-gradient direction. However, due to the overhead B.A.R.T. tracks, there was insufficient vertical clearance to drill at this location. Therefore, drill hole 3 was moved to the location shown on Figure 2. However, it is still in a position where a representative down-gradient ground water sample can be obtained. All of the borings were drilled with eight-inch diameter hollowstem augers and undisturbed soil samples were obtained down to the shallowest ground water table. All soil samples obtained were contained within two-inch diameter brass liners, wrapped in foil, capped at both ends, labeled, and kept refrigerated for transportation to the laboratory for analysis. Drill holes 1, 2, and 3 were terminated approximately ten feet below the first encounter of ground water and converted to monitoring wells (MW-1, MW-2, MW-3) by installing two-inch diameter, threaded, PVC well casing through the hollowstem augers, with the bottom fifteen to twenty feet of the casings being factory slotted to allow the inflow of ground water. The annular space around the slotted interval of the wells was packed with coarse sand to act as a filter to screen out fine-grained sand and silt that could clog the slotted interval. A one-foot thick bentonite cap was placed on top of the sand pack filter followed by a cement annular seal up to ground surface. The wells were completed within locking vaults inside traffic-rated chesty boxes to prevent unauthorized access. A generalized well construction detail is presented on Figure 3.

On December 1, 1987, the wells were developed to ensure that clean ground water was flowing through the slotted intervals freely using a submersible, positive displacement, bladder pump. When the required number of well volumes were removed, water samples were obtained. Soil and ground water samples to be tested were transported in a refrigerated container to California Water Labs of Modesto, accompanied by appropriate chain-of-custody documents.

All augers and down-hole tools were thoroughly steam cleaned between borings and all soil sampling apparatus was steam cleaned between each sampling run to prevent transfer of contamination. The submersible pump used to develop and sample the wells was also steam cleaned between each use.

Subsurface Conditions

Drill holes 1, 2, and 3 (MW-1, MW-2, MW-3) were all drilled to a total depth of forty feet. Silts of varying consistencies and clay content were encountered in each borehole extending from beneath the asphalt sub-base to the bottom of the holes. Initial depth to ground water in MW-1, MW-2, and MW-3 was measured at 29 feet, 29 feet, and 30 feet, respectively. Ground water depths measured upon completion of the field investigation were 29.12 feet, 28.45 feet, and 27.21 feet, respectively, below ground surface. The anticipated direction of ground water flow is to the southwest, however, since the horizontal hydraulic gradient of the shallow ground water table is generally so gentle in the area, the flow direction can easily be altered by local well pumping, seasonal fluctuations, or changes in water use habits. A survey of the wells will provide a more precise ground water flow direction. Logs of the exploratory borings are presented in Appendix A.

Chemical Analysis

Soil samples analyzed from each boring were obtained at 3.5 feet below ground surface to determine whether any chemicals used on site or in the vicinity had ever been spilled on or near the property. Soil and ground water samples obtained from MW-1, MW-2, and MW-3 were analyzed for 1) volatile organic and aromatic constituents using EPA Test Methods 601/602 (8010/8020 for soil), 2) total petroleum hydrocarbons using gasoline, diesel fuel, oil, kerosene, and paint thinner as standards, and 3) heavy metals on the Priority Pollutant List. The soil and ground water samples obtained from drill hole 3 (MW-3) were additionally analyzed for base, neutral, and acid compounds using EPA Test Method 625 (8270 for soil) and pesticides and PCBs using EPA Test Method 608 (8080 for soil).

Results of the analyses have revealed the presence of tetrachloroethene (PCE) and trichloroethylene (TCE) in the soil samples analyzed from DH-1, DH-2, and DH-3. Motor oil was also detected in the soil sample obtained from DH-1. However, since oil was not detected in DH-2 or DH-3, the oil in the soil does not appear to be pervasive. Analysis of the ground water from all three wells also revealed the presence of PCE and TCE.

Cis-1,2-Dichloroethene (Cis-1,2-DCE) was additionally detected in the ground water samples obtained from MW-1 and MW-3. The concentrations of these compounds are presented in Table 1. Results of the remainder of the analytical tests revealed the soil and ground water to be unaffected by petroleum hydrocarbons, except for that detected in drill hole 1, base, neutral, and acid compounds, and pesticides and PCBs. Trace concentrations



February 12, 1988

of heavy metals were detected in the soil and ground water samples obtained, however none of the metals detected exceeded State-established levels to consider them hazardous or to warrant further analysis. Results of the laboratory analyses are presented in Appendix B.

The PCE and TCE detected in the soil appears to be distributed in highest concentration toward the western property boundary. Likewise, the PCE, TCE, and Cis-1,2-DCE detected in the ground water are all present above the State-established action levels, and also appear to be distributed in highest concentration toward the western property boundary. This may indicate the subject site is situated near the edge of a contamination plume where higher concentrations may be present west or south of the site, or may suggest the contamination plume has migrated from an up-gradient direction to its present location. However, further investigation in the vicinity of the site would be necessary to confirm this. The compounds detected in the soil and ground water are the same as those observed in the State Department of Health Services' ground water investigations being conducted in the areas mentioned earlier, however, at this stage in the investigation it would be premature to conclude that the contamination detected at Staefa Control is connected to that discovered at Factor Avenue or 139th Avenue. Furthermore, with the limited data gathered on site to date, it is too early to determine whether the subject site is the source of the contamination or if the source exists nearby.

Conclusions/Recommendations

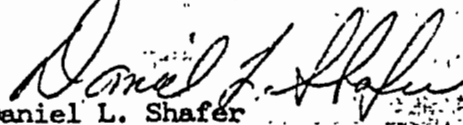
Laboratory analysis has revealed the presence of PCE, TCE, and Cis-1,2-DCE in the soil and ground water exceeding State-established levels beneath the subject site. The concentrations detected and their distribution across the site indicates the site may be situated on the edge of a contamination plume, however, whether the site is the source of the soil and ground water contamination or not can only be determined through further investigation.

Since the contaminants detected in the soil and ground water are the same as those currently being investigated in the vicinity of the subject site, we recommend these results be reported to the State Department of Health Services for their evaluation.

Respectfully submitted,

BETA ASSOCIATES, INC.

reviewed by:


Daniel L. Shafer
Project Geologist

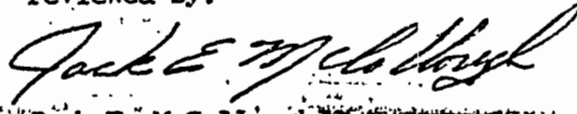

Jack E. McCollough
Registered Geologist #1559
Certified Engineering Geologist #905



TABLE 1

Summary of Analytical Results in Soil*

<u>Compound</u>	<u>DH-1 @ 3.5'</u>	<u>DH-2 @ 3.5'</u>	<u>DH-3 @ 3.5'</u>
Tetrachloroethene ¹	1360	48.3	200
Trichloroethylene ¹	235	2.7	22.3
Motor Oil ²	260	ND	ND

Summary of Analytical Results in Ground Water*

<u>Compound</u>	<u>MW-1</u>	<u>MW-2</u>	<u>MW-3</u>	<u>Action Level</u>
Tetrachloroethene ¹	209	12.6	228	4.0
Trichloroethylene ¹	222	6.9	397	5.0
Cis-1,2-Dichloroethene ¹	60.4	ND	47.3	16.0

* only the compounds detected are presented.

(1) concentrations presented in parts per billion (ppb).

(2) concentrations presented in parts per million (ppm).



BASE MAP REF: U.S.G.S. 7.5 MINUTE TOPOGRAPHIC QUADRANGLE, SAN LEANDRO, CALIFORNIA, PHOTOREVISED 1980

SCALE: 1" = 2000'

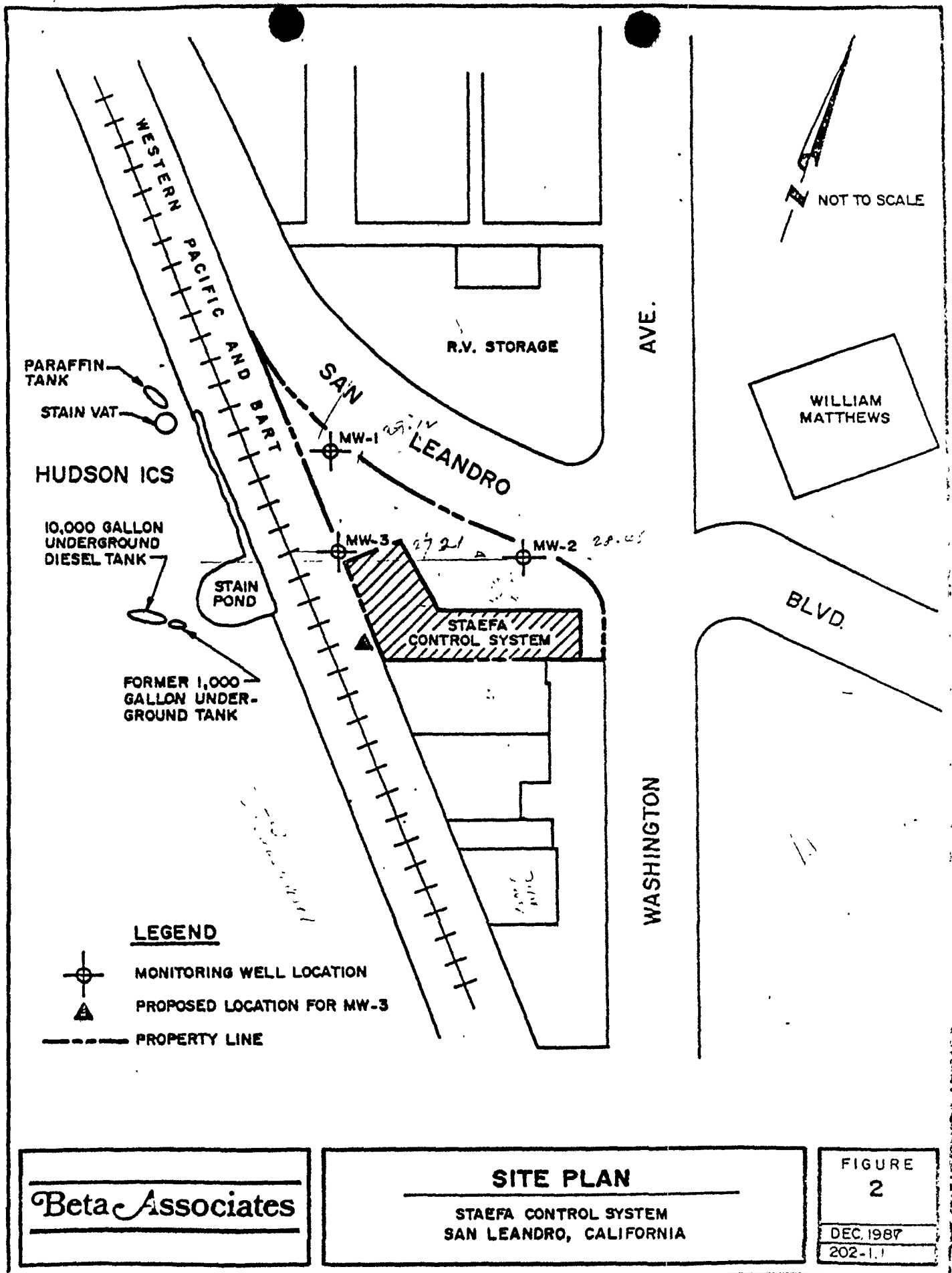
Beta Associates

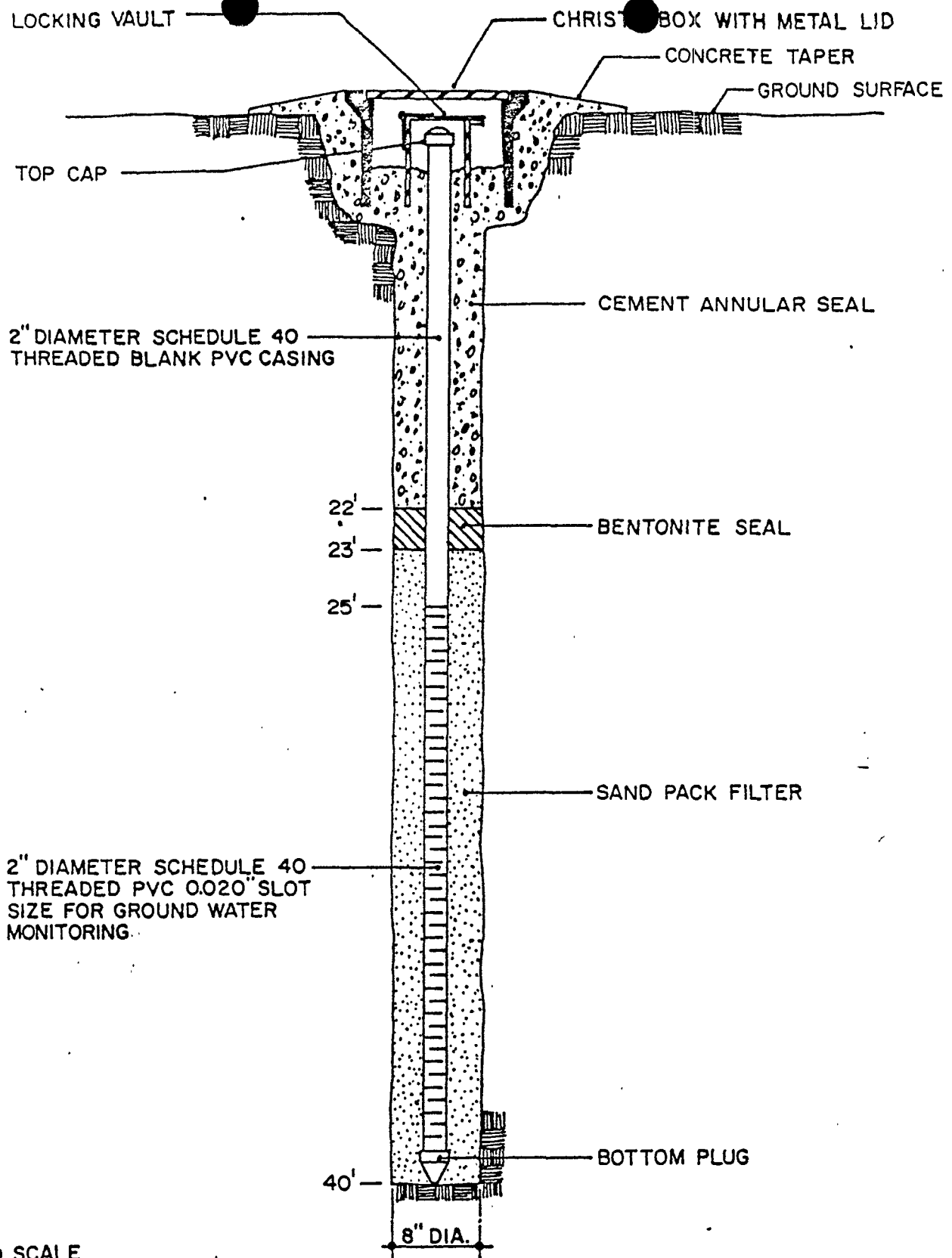
LOCATION MAP

STAEFA CONTROL SYSTEM
SAN LEANDRO, CALIFORNIA

FIGURE
1

DEC. 1987
202-1.1





NOT TO SCALE

Beta Associates

GENERAL MONITORING WELL CONSTRUCTION DETAIL

STAEFA CONTROL SYSTEM
SAN LEANDRO, CALIFORNIA

FIGURE
3

DEC. 1987
202-1.1

Appendix A
Logs of Exploratory Borings

EXPLORATION DRILL HOLE LOG

HOLE No.

DH-1

PROJECT STAFFA CONTROL

DATE 11/25/87

LOGGED BY RAB

DRILL RIG CME 55

HOLE DIA. 8"

SAMPLER Mod. Cal

GROUNDWATER DEPTH INITIAL 29'

FINAL 29.12'

HOLE ELEV. --

DESCRIPTION	SOIL TYPE	DEPTH	SAMPLE	BLOWS PER FOOT	POCKET PEN (psi)	TORVANE (psi)	LIQUID LIMIT	WATER CONTENT	PLASTIC LIMIT	DRY DENSITY (pcf)	FAILURE STRAIN (%)	UNCONFINED SHEAR STRENGTH (psi)
1/2" A/C; 12" silty sandy GRAVEL; brown, damp, medium dense: Base ROCK; well graded.	GW	1										
		2	X									
silty SAND, GRAVEL; dark brown, medium dense; FILL, well graded.	GW	3		25								
		4	X	16								
SILT; black-brown, damp, stiff w/trace clay.	ML	5										
		6	X	24								
		7										
		8										
		9										
		10										
SILT; brown, damp, stiff to very stiff w/trace clay.	ML	11	X	19								
		12										
		13										
		14										
"same"; brown to light brown, stiff ; clayey trace diminished.	ML	15										
		16	X	16								
		17										
		18										
		19										
		20										

EXPLORATION DRILL HOLE LOG

HOLE No. DH-1

PROJECT STAEFA CONTROL

DATE 11/25/87

LOGGED BY RAB

DRILL RIG CME 55

HOLE DIA. 8"

SAMPLER Mod. Cal

GROUNDWATER DEPTH INITIAL 29'

FINAL 29.12'

HOLE ELEV. --

DESCRIPTION	SOIL TYPE	DEPTH	SAMPLE	BLOWS PER FOOT	POCKET PEN.(psi)	TORVANE (psi)	LIQUID LIMIT	WATER CONTENT	PLASTIC LIMIT	DRY DENSITY (pcf)	FAILURE STRAIN(%)	UNCONFINED SHEAR STRENGTH(psi)
SILT; brown to light brown, damp, stiff.	ML	21	X	14								
		22										
		23										
		24										
SILT; brown & gray, mottled, damp to moist, firm w/trace clay.	ML	25	X	8								
		26										
		27										
		28										
slightly clayey SILT; gray-brown, damp to moist, firm.	ML	29										
		30	X	9								
		31										
		32										
		33										
		34										
rust mottles & occasional charcoal specks below 25'.	ML	35										
		36										
		37										
		38										
Bottom of Drill Hole @ 40.0'.		39										

EXPLORATION DRILL HOLE LOG

HOLE No.

DH-2

PROJECT STAEFA CONTROL

DATE 11/25/87

LOGGED BY RAE

DRILL RIG CME 55

HOLE DIA. 8"

SAMPLER Mod. Cal

GROUNDWATER DEPTH INITIAL 29'

FINAL 28.45'

HOLE ELEV. --

DESCRIPTION	SOIL TYPE	DEPTH	SAMPLE	BLOWS PER FOOT	POCKET PEN (tsf)	TORVANE (tsf)		LIQUID LIMIT	WATER CONTENT	PLASTIC LIMIT	DRY DENSITY (pcf)	FAILURE STRAIN(%)	UNCONFINED SHEAR STRENGTH(psf)
1" A/C; 12" silty sandy; GRAVEL, brown, damp, medium dense: BASE ROCK; well graded.	GW	1											
silty sandy, GRAVEL; dark brown, damp, medium dense; well graded: (FILL).	GW	2	X	30									
		3											
silty GRAVEL: black-brown, damp, medium dense; clayey.	GM/GC	4	X	17									
	ML	5											
SILT; black-brown, damp. stiff.	ML	6	X	18									
		7											
		8											
		9											
		10											
	ML	11	X	17									
		12											
		13											
		14											
"same as above"		15											
color change to light brown.	ML	16	X	18									
		17											
		18											
		19											
		20											

EXPLORATION DRILL HOLE LOG

HOLE No.

DH-2

PROJECT STAEFA CONTROL

DATE 11/25/87

LOGGED BY RAB

DRILL RIG ONE 55

HOLE DIA. 8"

SAMPLER Mod. Cal

GROUNDWATER DEPTH INITIAL 29'

FINAL 28.45'

HOLE ELEV. __

DESCRIPTION	SOIL TYPE	DEPTH	SAMPLE	BLOWS PER FOOT	POCKET PEN.(tsf)	TORVANE(tsf)	LIQUID LIMIT	WATER CONTENT	PLASTIC LIMIT	DRY DENSITY (pcf)	FAILURE STRAIN(%)	UNCONFINED SHEAR STRENGTH(psf)
SAND; light brown, damp, medium dense; very fine grained.	SM	21	X	16								
		22										
		23										
		24										
CLAY; medium brown, very damp, stiff.	CH	25	X	12								
		26										
		27										
		28										
		29										
silty CLAY; gray-brown, moist to wet, firm to stiff w/trace pea gravel w/interbedded lenses of CLAY (CH) as above.	CI	30	X	11								
		31										
		32										
		33										
		34										
Interbedded lenses of SILT; gray, wet, soft w/CLAY, brown, w/occasional rust & charcoal mottles, damp, firm to stiff.	ML/CH	35										
		36										
		37										
		38										
		39										
Bottom of Drill Hole @ 40.0'.												

EXPLORATION DRILL HOLE LOG

HOLE No.

LH-3

PROJECT STAEFA CONTROL

DATE 11/25/87

LOGGED BY RAB

DRILL RIG CME 55

HOLE DIA. 8"

SAMPLER Mod. Cal

GROUNDWATER DEPTH INITIAL 28'

FINAL 27.21'

HOLE ELEV. --

DESCRIPTION	SOIL TYPE	DEPTH	SAMPLE	BLOWS PER FOOT	POCKET PEN (psi)	TORVANE (psi)	LIQUID LIMIT	WATER CONTENT	PLASTIC LIMIT	DRY DENSITY (pcf)	FAILURE STRAIN(%)	UNCONFINED SHEAR STRENGTH(psi)
2" A/C silty GRAVEL w/sand; brown, damp, medium dense (BASE ROCK/FILL)	GW	1										
		2	X	18								
slightly clayey SILT: black, damp, stiff.	ML	3										
		4	X	13								
clayey SILT, dark brown. damp, stiff.	ML	5										
		6	X	13								
slightly clayey.	ML	7										
		8										
		9										
		10										
medium brown in color more clayey than @ 5'.	ML	11	X	12								
		12										
		13										
		14										
SILT; light brown, damp, stiff.	ML	15										
		16	X	13								
		17										
		18										
		19										
		20										

EXPLORATION DRILL HOLE LOG

HOLE No.

CH-3

PROJECT STAEFA CONTROL

DATE 11/25/87

LOGGED BY EAB

DRILL RIG CME 55

HOLE DIA. 8"

SAMPLER Mod. Cal

GROUNDWATER DEPTH INITIAL 23'

FINAL 27.21'

HOLE ELEV. --

DESCRIPTION	SOIL TYPE	DEPTH	SAMPLE	BLOWS PER FOOT	POCKET PEN.(tsf)	TORVANE(tsf)	LIQUID LIMIT	WATER CONTENT	PLASTIC LIMIT	DRY DENSITY (pcf)	FAILURE STRAIN(%)	UNCONFINED SHEAR STRENGTH(psf)
SILT; light brown, damp to slightly moist, firm.	ML	21	X	10								
		22										
		23										
		24										
brown, moist, soft to firm.	ML	25	X	6								
		26										
		27										
		28										
		29										
		30	X	8								
		31										
SILT; gray-brown, damp to moist, firm w/occasional shell fragments.	ML	32										
		33										
		34										
		35										
		36										
		37										
		38										
		39										
Bottom of Drill Hole @ 40.0'.												

Appendix B
Certified Laboratory Analysis

California Water Labs, Inc.

P. O. BOX 4248
1430 CARPENTER LANE - SUITE G
MODESTO, CA 95352
PHONE (209) 527-4050

Purveyor Beta & Associates
Street 2068 Lincoln Avenue
City San Jose, CA Zip 95125
Sample I.D. DH-1 @ 3.5 ml
Collected by: Purveyor

Lab I.D. P-55229
Purchase Order Job # 202-1.1
Referring Lab
Date Collected 11-25-87

STAEFA CONTROL

225 HALOGENATED/AROMATIC VOLATILE ORGANICS: SOLID MATRICES (METHODS 8010/8020)

COMPOUND	RESULTS ug/kg	DET. LIMIT	COMPOUND	RESULTS ug/kg	DET. LIMIT
CHLOROMETHANE	ND	25.0	1,2-DICHLOROPROPANE	ND	25.0
DICHLORODIFLUOROMETHANE	ND	25.0	TRANS-1,3-DICHLOROPROPENE	ND	25.0
BROMOMETHANE	ND	25.0	TRICHLOROETHYLENE	235	25.0
VINYL CHLORIDE	ND	50.0	DIBROMOCHLOROMETHANE	ND	25.0
CHLORETHANE	ND	25.0	CIS-1,3-DICHLOROPROPENE	ND	25.0
METHYLENE CHLORIDE	ND	25.0	1,1,2-TRICHLOROETHANE	ND	25.0
TRICHLOROFLUOROMETHANE	ND	25.0	BROMOFORM	ND	25.0
1,1-DICHLOROETHENE	ND	10.0	1,1,2,2-TETRACHLOROETHANE	ND	25.0
1,1-DICHLOROETHANE	ND	25.0	TETRACHLOROETHENE	1360	25.0
TRANS-1,2-DICHLOROETHENE	ND	25.0	CHLOROBENZENE	ND	25.0
CHLOROFORM	ND	25.0	1,2-DICHLOROBENZENE	ND	25.0
1,2-DICHLOROETHANE	ND	25.0	1,3-DICHLOROBENZENE	ND	25.0
1,1,1-TRICHLOROETHANE	ND	25.0	1,4-DICHLOROBENZENE	ND	25.0
CARBON TETRACHLORIDE	ND	25.0	BENZENE	ND	25.0
BROMODICHLOROMETHANE	ND	25.0	ETHYL BENZENE	ND	25.0
2-CHLOROETHYL VINYL ETHER	ND	50.0	TOLUENE	ND	25.0
			XYLENE	ND	25.0

(Sample prepared using Method 5030 for purge and trap.)

Date Received 11-30-87
Date Started 12-03-87
Date Completed 12-09-87

Ref: SW-846

By: *Corinne Hidalgo*

*detection limits have been elevated ten times due to high levels of tetrachloroethene.

California Water Labs, Inc.

P. O. BOX 4248
1430 CARPENTER LANE - SUITE G
MODESTO, CA 95352
PHONE (209) 527-4050

Purveyor Beta & Associates
Street 2068 Lincoln Avenue
City San Jose, CA Zip 95125
Sample L.D. ~~Method~~
Collected by: Alan Byrum

Lab I.D. P-55286
Purchase Order Job 202-1.1
Referring Lab
Date Collected 12-01-87

STAEFA CONTROL

224 PURGEABLE HALOCARBONS & PURGEABLE AROMATICS (METHOD 601 & 602)

COMPOUND	RESULTS ug/L	DETECTION LIMIT ug/L	COMPOUND	RESULTS ug/L	DETECTION LIMIT ug/L
CHLOROMETHANE	ND	5.0	1,2-DICHLOROPROPANE	ND	5.0
DICHLOROFLUOROMETHANE	ND	5.0	TRANS-1,3-DICHLOROPROPENE	ND	5.0
BROMOMETHANE	ND	5.0	TRICHLOROETHYLENE 222	ND	5.0
VINYL CHLORIDE	ND	10.0	DIBROMOCHLOROMETHANE	ND	5.0
CHLOROETHANE	ND	5.0	CIS-1,3-DICHLOROPROPENE	ND	5.0
METHYLENE CHLORIDE	ND	5.0	1,1,2-TRICHLOROETHANE	ND	5.0
TRICHLOROFLUOROMETHANE	ND	5.0	BROMOFORM	ND	5.0
1,1-DICHLOROETHENE	ND	2.0	1,1,2,2-TETRACHLOROETHANE	ND	5.0
1,1-DICHLOROETHANE	ND	5.0	TETRACHLOROETHENE 209	ND	5.0
TRANS-1,2-DICHLOROETHENE	*	5.0	CHLOROBENZENE	ND	5.0
CHLOROFORM	ND	5.0	TOLUENE	ND	5.0
1,2-DICHLOROETHANE	ND	5.0	ETHYL BENZENE	ND	5.0
1,1,1-TRICHLOROETHANE	ND	5.0	BENZENE	ND	5.0
CARBON TETRACHLORIDE	ND	5.0	1,2-DICHLOROBENZENE	ND	5.0
BROMODICHLOROMETHANE	ND	5.0	1,3-DICHLOROBENZENE	ND	5.0
2-CHLOROETHYL VINYL ETHER	ND	10.0	1,4-DICHLOROBENZENE	ND	5.0
			TOTAL XYLENES	ND	5.0

Date Received 12-01-87
Date Started 12-03-87
Date Completed 12-08-87

Detection limits elevated ten times
*CIS-1,2-Dichloroethene is present at approx.
60.4 ug/L.
By: *Claudia Hidalgo*

California Water Labs, inc.

P. O. BOX 4249
1430 CARPENTER LANE — SUITE G
MODESTO, CA 95352
PHONE (209) 527-4050

Purveyor Beta & Associates
Street 2068 Lincoln Avenue
City San Jose, CA Zip 95125
Sample I.D. Listed
Collected by: Purveyor

Lab I.D. Listed
Purchase Order Job # 202-1.1
Referring Lab
Date Collected 11-25-87

STAEFA CONTROL

<u>CWL I.D.</u>	<u>Sample I.D.</u>	<u>Gas (mg/kg)</u>	<u>Paint Thinner (mg/kg)</u>
P-55229	DH-1 @ 3.5'	ND, < 1	ND, < 1
P-55230	DH-2 @ 3.5'	ND, < 1	ND, < 1
P-55231	DH-3 @ 3.5'	ND, < 1	ND, < 1

Date Received 11-30-87
Date Started 12-03-87
Date Completed 12-07-87

By: *Clara Hidalgo*

California Water Labs, Inc.

P. O. BOX 4249
1430 CARPENTER LANE — SUITE G
MODESTO, CA 95352
PHONE (209) 527-4050

Purveyor Beta & Associates
Street 2068 Lincoln Avenue
City San Jose, CA Zip 95125
Sample I.D. DH-1 @ 35' ← 3.5'
Collected by: Purveyor

Lab I.D. P-55229
Purchase Order Job # 202-1.1
Referring Lab _____
Date Collected 11-25-87

<u>COMPOUND</u>	<u>RESULT (mg/lsg)</u>	<u>DETECTION LIMIT (mg/kg)</u>
DIESEL	ND	10.0
KEROSENE	ND	10.0
MOTOR OIL	260	100.0

Date Received 11-30-87
Date Started 12-01-87
Date Completed 12-10-87

By: Carlin Hildahl

California Water Labs, Inc.

P. O. BOX 4249
1430 CARPENTER LANE -- SUITE G
MODESTO, CA 95352
PHONE (209) 527-4050

Purveyor Beta & Associates
Street 2068 Lincoln Avenue
City San Jose, CA Zip 95125
Sample I.D. Listed
Collected by: Alan Byrum

Lab I.D. Listed
Purchase Order Job # 202-1.1
Referring Lab
Date Collected 12-01-87

STAEFA CONTROL

<u>CWL I.D.</u>	<u>Sample I.D.</u>	<u>GAS (mg/L)</u>	<u>Paint Thinner (mg/L)</u>
P-55286	MW 1	ND, < 1	ND, < 1
P-55287	MW 2	ND, < 1	ND, < 1
P-55288	MW 3	ND, < 1	ND, < 1

Date Received 12-01-87
Date Started 12-04-87
Date Completed 12-07-87

By: Claudia Hidalgo

California Water Labs, Inc.

P. O. BOX 4249
1430 CARPENTER LANE — SUITE G
MODESTO, CA 95352
PHONE (209) 527-4050

Surveyor Beta & Associates
Street 2068 Lincoln Avenue
City San Jose, CA Zip 95125
Sample I.D. MW #1
Collected by: Alan Byrum

Lab I.D. P-55286
Purchase Order Job # 202-1.1
Referring Lab
Date Collected 12-01-87

STAEFA CONTROL

<u>COMPOUND</u>	<u>RESULT (ug/L)</u>	<u>DETECTION LIMIT (ug/L)</u>
DIESEL	ND	50
KEROSENE	ND	50
MOTOR OIL	ND	300

Date Received 12-01-87
Date Started 12-04-87
Date Completed 12-07-87

By: Claudia H. Dahl

California Water Labs, Inc.

P. O. BOX 4249
1430 CARPENTER LANE — SUITE G
MODESTO, CA 95362
PHONE (209) 527-4050

Purveyor Beta & Associates

Street 2068 Lincoln Avenue

City San Jose, CA Zip 95125

Sample I.D. DH-1-8-3.5'

Collected by: Purveyor

Lab I.D. P-55229

Purchase Order Job # 202-1.1

Referring Lab

Date Collected 11-25-87

STATEFA CONTROL

874

TILC

Determination	Result mg/kg	State Allowable Limits mg/kg
Antimony	< 0.5	500
Arsenic	6.0	500
Barium	165	10,000
Beryllium	< 0.5	75
Cadmium	< 1.25	100
Chromium	94	2,500
Cobalt	80	8,000
Copper	75	2,500
Lead	84	1,000
Mercury	0.0029	20
Molybdenum	0.15	3,500
Nickel	89	2,000
Selenium	< 0.25	100
Silver	< 0.5	500
Thallium	< 5.0	700
Vanadium	130	2,400
Zinc	89	5,000

Date Received 11-30-87

Date Started 12-01-87

Date Completed 12-16-87

By:

Anthony J. Foster

California Water Labs, Inc.

P. O. BOX 4249
1430 CARPENTER LANE — SUITE G
MODESTO, CA 95352
PHONE (209) 527-4050

Purveyor Beta & Associates
Street 2068 Lincoln Avenue
City San Jose, CA Zip 95125
Sample I.D. ~~W-111~~
Collected by: Alan Byrum

Lab I.D. P-55286
Purchase Order Job # 202-1.1
Referring Lab
Date Collected 12-01-87

STAEFA CONTROL

846

PRIORITY POLLUTANT METALS

<u>SUBSTANCE</u>	<u>RESULTS (mg/L)</u>
Antimony	< 0.01
Arsenic	< 0.01
Barium	0.15
Beryllium	< 0.01
Cadmium	< 0.001
Chromium	0.011
Cobalt	< 0.1
Copper	< 0.05
Lead	< 0.01
Mercury	< 0.001
Molybdenum	< 0.01
Nickel	< 0.01
Selenium	< 0.005
Silver	< 0.01
Thallium	< 0.1
Vanadium	0.02
Zinc	< 0.05

Date Received 12-01-87
Date Started 12-03-87
Date Completed 12-15-87

By: 

California Water Labs, Inc.

P. O. BOX 4249
1430 CARPENTER LANE — SUITE G
MODESTO, CA 95352
PHONE (209) 527-4050

Purveyor Beta & Associates

Street 2068 Lincoln Avenue

City San Jose, CA Zip 95125

Sample I.D. DH-2 @ 3.5'

Collected by: Purveyor

Lab I.D. P-55230

Purchase Order Job # 202-1.1

Referring Lab

Date Collected 11-25-87

STAEFA CONTROL

225 HALOGENATED/AROMATIC VOLATILE ORGANICS: SOLID MATRICES (METHODS 8010/8020)

COMPOUND	RESULTS ug/kg	DET. LIMIT	COMPOUND	RESULTS ug/kg	DET. LIMIT
CHLOROMETHANE	ND	2.5	1,2-DICHLOROPROPANE	ND	2.5
DICHLORODIFLUOROMETHANE	ND	2.5	TRANS-1,3-DICHLOROPROPENE	ND	2.5
BROMOMETHANE	ND	2.5	TRICHLOROETHYLENE	2.7	2.5
VINYL CHLORIDE	ND	5.0	DIBROMOCHLOROMETHANE	ND	2.5
CHLORETHANE	ND	2.5	CIS-1,3-DICHLOROPROPENE	ND	2.5
METHYLENE CHLORIDE	ND	2.5	1,1,2-TRICHLOROETHANE	ND	2.5
TRICHLOROFLUOROMETHANE	ND	2.5	BROMOFORM	ND	2.5
1,1-DICHLOROETHENE	ND	1.0	1,1,2,2-TETRACHLOROETHANE	ND	2.5
1,1-DICHLOROETHANE	ND	2.5	TETRACHLOROETHENE	48.3	2.5
TRANS-1,2-DICHLOROETHENE	ND	2.5	CHLOROBENZENE	ND	2.5
CHLOROFORM	ND	2.5	1,2-DICHLOROBENZENE	ND	2.5
1,2-DICHLOROETHANE	ND	2.5	1,3-DICHLOROBENZENE	ND	2.5
1,1,1-TRICHLOROETHANE	ND	2.5	1,4-DICHLOROBENZENE	ND	2.5
CARBON TETRACHLORIDE	ND	2.5	BENZENE	ND	10.0
BROMODICHLOROMETHANE	ND	2.5	ETHYL BENZENE	ND	10.0
2-CHLOROETHYL VINYL ETHER	ND	5.0	TOLUENE	ND	10.0
			XYLENE	ND	20.0

(Sample prepared using Method 5030 for purge and trap.)

Date Received 11-30-87

Date Started 12-03-87

Date Completed 12-08-87

Ref: SW-846

By:

Amelia H. Hahl

California Water Labs, Inc.

P. O. BOX 4240
1430 CARPENTER LANE - SUITE G
MODESTO, CA 95362
PHONE (209) 527-4060

Purveyor Beta & Associates
Street 2068 Lincoln Avenue
City San Jose, CA Zip 95125
Sample I.D. MM#2
Collected by: Alan Byrum

Lab I.D. P-55287
Purchase Order Job 202-1.1
Referring Lab _____
Date Collected 12-01-87

STAEFA CONTROL

224 PURGEABLE HALOCARBONS & PURGEABLE AROMATICS (METHOD 601 & 602)

COMPOUND	RESULTS ug/L	DETECTION LIMIT ug/L	COMPOUND	RESULTS ug/L	DETECTION LIMIT ug/L
CHLOROMETHANE	ND	0.5	1,2-DICHLOROPROPANE	ND	0.5
DICHLORODIFLUOROMETHANE	ND	0.5	TRANS-1,3-DICHLOROPROPENE	ND	0.5
BROMOMETHANE	ND	0.5	TRICHLOROETHYLENE	6.9	0.5
VINYL CHLORIDE	ND	1.0	DIBROMOCHLOROMETHANE	ND	0.5
CHLOROETHANE	ND	0.5	CIS-1,3-DICHLOROPROPENE	ND	0.5
METHYLENE CHLORIDE	ND	0.5	1,1,2-TRICHLOROETHANE	ND	0.5
TRICHLOROFLUOROMETHANE	ND	0.5	BROMOFORM	ND	0.5
1,1-DICHLOROETHENE	ND	0.2	1,1,2,2-TETRACHLOROETHANE	ND	0.5
1,1-DICHLOROETHANE	ND	0.5	TETRACHLOROETHENE	12.6	0.5
TRANS-1,2-DICHLOROETHENE	ND	0.5	CHLOROBENZENE	ND	0.5
CHLOROFORM	ND	0.5	TOLUENE	ND	0.5
1,2-DICHLOROETHANE	ND	0.5	ETHYL BENZENE	ND	0.5
1,1,1-TRICHLOROETHANE	ND	0.5	BENZENE	ND	0.5
CARBON TETRACHLORIDE	ND	0.5	1,2-DICHLOROBENZENE	ND	0.5
BROMODICHLOROMETHANE	ND	0.5	1,3-DICHLOROBENZENE	ND	0.5
2-CHLOROETHYL VINYL ETHER	ND	1.0	1,4-DICHLOROBENZENE	ND	0.5
			TOTAL XYLENES	ND	0.5

Date Received 12-01-87
Date Started 12-03-87
Date Completed 12-07-87

By: Christine Hidalgo

California Water Labs, Inc.

P. O. BOX 4249
1430 CARPENTER LANE — SUITE G
MODESTO, CA 95352
PHONE (209) 527-4050

Purveyor Beta & Associates
Street 2068 Lincoln Avenue
City San Jose, CA Zip 95125
Sample I.D. DH-2 @ 3.5'
Collected by: Purveyor

Lab I.D. P-55230
Purchase Order Job 202-1.1
Referring Lab _____
Date Collected 11-25-87

STAEFA CONTROL

<u>COMPOUND</u>	<u>RESULT (mg/kg)</u>	<u>DETECTION LIMIT (mg/kg)</u>
DIESEL	ND	1.0
KEROSENE	ND	1.0
MOTOR OIL	ND	10.0

Date Received 11-30-87
Date Started 12-01-87
Date Completed 12-10-87

By: *Christina Hedrick*

California Water Labs, Inc.

P. O. BOX 4249
1430 CARPENTER LANE — SUITE G
MODESTO, CA 95352
PHONE (209) 527-4050

Purveyor Beta & Associates

Street 2068 Lincoln Avenue

City San Jose, CA Zip 95125

Sample I.D. MW # 2

Collected by: Alan Byrum

Lab I.D. P-55287

Purchase Order Job # 202-1.1

Referring Lab

Date Collected 12-01-87

STAEFA CONTROL

<u>COMPOUND</u>	<u>RESULT (ug/L)</u>	<u>DETECTION LIMIT (ug/L)</u>
DIESEL	ND	50
KEROSENE	ND	50
MOTOR OIL	ND	300

Date Received 12-01-87

Date Started 12-04-87

Date Completed 12-07-87

By: Claudia Hidalgo

California Water Labs, Inc.

P. O. BOX 4249
1430 CARPENTER LANE - SUITE G
MODESTO, CA 95352
PHONE (209) 527-4050

Purveyor Beta & Associates
Street 2068 Lincoln Avenue
City San Jose, CA Zip 95125
Sample I.D. ~~WH-2-83-51~~
Collected by: Purveyor

Lab I.D. P-55230
Purchase Order Job # 202-1.1
Referring Lab
Date Collected 11-25-87

STAFA CONTROL

874 TTLC

Determination	Result mg/kg	State Allowable Limits mg/kg
Antimony	< 0.5	500
Arsenic	5.0	500
Barium	235.	10,000
Beryllium	< 0.5	75
Cadmium	< 1.25	100
Chromium	55.	2,500
Cobalt	42.	8,000
Copper	24.	2,500
Lead	< 5.0	1,000
Mercury	< 0.05	20
Molybdenum	1.0	3,500
Nickel	65.	2,000
Selenium	< 0.25	100
Silver	< 0.5	500
Thallium	< 5.0	700
Vanadium	45.	2,400
Zinc	50.	5,000

Date Received 11-30-87
Date Started 12-01-87
Date Completed 12-16-87

By: Keith Crocker

California Water Labs, Inc.

P. O. BOX 4249
1430 CARPENTER LANE -- SUITE G
MODESTO, CA 95352
PHONE (209) 527-4050

Purveyor Beta & Associates
Street 2068 Lincoln Avenue
City San Jose, CA Zip 95125
Sample I.D. MW #2
Collected by: Alan Byrum

Lab I.D. P-55287
Purchase Order Job #202-1.1
Referring Lab _____
Date Collected 12-01-87

STAEFA CONTROL

846

PRIORITY POLLUTANT METALS

<u>SUBSTANCE</u>	<u>RESULTS (mg/L)</u>
Antimony	< 0.01
Arsenic	< 0.01
Barium	0.13
Beryllium	< 0.01
Cadmium	< 0.001
Chromium	0.013
Cobalt	< 0.1
Copper	< 0.05
Lead	< 0.01
Mercury	< 0.001
Molybdenum	< 0.01
Nickel	< 0.01
Selenium	< 0.005
Silver	< 0.01
Thallium	< 0.1
Vanadium	0.02
Zinc	< 0.05

Date Received 12-01-87
Date Started 12-03-87
Date Completed 12-15-87

By: Deeth Chock

California Water Labs, Inc.

P. O. BOX 4248
1430 CARPENTER LANE -- SUITE G
MODESTO, CA 95352
PHONE (209) 527-4050

Purveyor Beta & Associates
Street 2068 Lincoln Avenue
City San Jose, CA Zip 95125
Sample I.D. ~~WH-3.8-3.5~~
Collected by: Purveyor

Lab I.D. P-55231
Purchase Order Job # 202-1.1
Referring Lab
Date Collected 11-25-87
STAEFA CONTROL

225 HALOGENATED/AROMATIC VOLATILE ORGANICS: SOLID MATRICES (METHODS. 8010/8020)

COMPOUND	RESULTS ug/kg	DET. LIMIT	COMPOUND	RESULTS ug/kg	DET. LIMIT
CHLOROMETHANE	ND	2.5	1,2-DICHLOROPROPANE	ND	2.5
DICHLORODIFLUOROMETHANE	ND	2.5	TRANS-1,3-DICHLOROPROPENE	ND	2.5
BROMOMETHANE	ND	2.5	TRICHLOROETHYLENE	22.3	2.5
VINYL CHLORIDE	ND	5.0	DIBROMOCHLOROMETHANE	ND	2.5
CHLORETHANE	ND	2.5	CIS-1,3-DICHLOROPROPENE	ND	2.5
METHYLENE CHLORIDE	ND	2.5	1,1,2-TRICHLOROETHANE	ND	2.5
TRICHLOROFLUOROMETHANE	ND	2.5	BROMOFORM	ND	2.5
1,1-DICHLOROETHENE	ND	1.0	1,1,2,2-TETRACHLOROETHANE	ND	2.5
1,1-DICHLOROETHANE	ND	2.5	TETRACHLOROETHENE	200	2.5
TRANS-1,2-DICHLOROETHENE	ND	2.5	CHLOROBENZENE	ND	2.5
CHLOROFORM	ND	2.5	1,2-DICHLOROBENZENE	ND	2.5
1,2-DICHLOROETHANE	ND	2.5	1,3-DICHLOROBENZENE	ND	2.5
1,1,1-TRICHLOROETHANE	ND	2.5	1,4-DICHLOROBENZENE	ND	2.5
CARBON TETRACHLORIDE	ND	2.5	BENZENE	ND	10.0
BROMODICHLOROMETHANE	ND	2.5	ETHYL BENZENE	ND	10.0
2-CHLOROETHYL VINYL ETHER	ND	5.0	TOLUENE	ND	10.0
			XYLENE	ND	20.0

(Sample prepared using Method 5030 for purge and trap.)

Date Received 11-30-87
Date Started 12-03-87
Date Completed 12-09-87

Ref: SW-846

By: 

California Water Labs, Inc.

P. O. BOX 4248
1430 CARPENTER LANE - SUITE G
MODESTO, CA 95352
PHONE (209) 527-4030

Purveyor Beta & Associates
Street 2068 Lincoln Avenue
City San Jose, CA Zip 95125
Sample I.D. ~~MTA-3~~
Collected by: Alan Byrum

Lab I.D. P-55288
Purchase Order job # 202-1.1
Referring Lab
Date Collected 12-01-87
STAEFA CONTROL

224 PURGEABLE HALOCARBONS & PURGEABLE AROMATICS (METHOD 601 & 602)

COMPOUND	RESULTS ug/L	DETECTION LIMIT ug/L	COMPOUND	RESULTS ug/L	DETECTION LIMIT ug/L
CHLOROMETHANE	ND	5.0	1,2-DICHLOROPROPANE	ND	5.0
DICHLORODIFLUOROMETHANE	ND	5.0	TRANS-1,3-DICHLOROPROPENE	ND	5.0
BROMOMETHANE	ND	5.0	TRICHLOROETHYLENE	397	5.0
VINYL CHLORIDE	ND	10.0	DIBROMOCHLOROMETHANE	ND	5.0
CHLOROETHANE	ND	5.0	CIS-1,3-DICHLOROPROPENE	ND	5.0
METHYLENE CHLORIDE	ND	5.0	1,1,2-TRICHLOROETHANE	ND	5.0
TRICHLOROFLUOROMETHANE	ND	5.0	BROMOFORM	ND	5.0
1,1-DICHLOROETHENE	ND	2.0	1,1,2,2-TETRACHLOROETHANE	ND	5.0
1,1-DICHLOROETHANE	ND	5.0	TETRACHLOROETHENE	228	5.0
TRANS-1,2-DICHLOROETHENE	ND	5.0	CHLOROBENZENE	ND	5.0
CHLOROFORM	ND	5.0	TOLUENE	ND	5.0
1,2-DICHLOROETHANE	ND	5.0	ETHYL BENZENE	ND	5.0
1,1,1-TRICHLOROETHANE	ND	5.0	BENZENE	ND	5.0
CARBON TETRACHLORIDE	ND	5.0	1,2-DICHLOROBENZENE	ND	5.0
BROMODICHLOROMETHANE	ND	5.0	1,3-DICHLOROBENZENE	ND	5.0
2-CHLOROETHYL VINYL ETHER	ND	10.0	1,4-DICHLOROBENZENE	ND	5.0
			TOTAL XYLENES	ND	5.0

Date Received 12-01-87
Date Started 12-04-87
Date Completed 12-08-87

Detection limits elevated ten times

*CIS-1,2-Dichloroethene is present at approx.
47.3 ug/L
By: *Clarence Hidalgo*

California Water Labs, Inc.

P.O. BOX 4249
1430 CARPENTER LANE — SUITE G
MODESTO, CA 95352
PHONE (209) 527-4050

Purveyor Beta & Associates
Street 2068 Lincoln Avenue
City San Jose, CA Zip 95125
Sample I.D. DH-3 @ 3.5'
Collected by: Purveyor

Lab I.D. P-55231
Purchase Order Job # 202-1.1
Referring Lab _____
Date Collected 11-25-87

STAEFA CONTROL

<u>COMPOUND</u>	<u>RESULT (mg/kg)</u>	<u>DETECTION LIMIT (mg/kg)</u>
DIESEL	ND	1.0
KEROSENE	ND	1.0
MOTOR OIL	ND	10.0

Date Received 11-30-87
Date Started 12-01-87
Date Completed 12-10-87

By: Claudia Hidalgo

California Water Labs, Inc.

P. O. BOX 4249
1430 CARPENTER LANE — SUITE G
MODESTO, CA 95352
PHONE (209) 527-4050

Purveyor Beta & Associates
Street 2068 Lincoln Avenue
City San Jose, CA Zip 95125
Sample I.D. MW #3
Collected by: Alan Byrum

Lab I.D. P-55288
Purchase Order Job 202-1.1
Referring Lab _____
Date Collected 12-01-87

STAEFA CONTROL

<u>COMPOUND</u>	<u>RESULT (ug/L)</u>	<u>DETECTION LIMIT (ug/L)</u>
DIESEL	ND	50
KEROSENE	ND	50
MOTOR OIL	ND	300

Date Received 12-01-87
Date Started 12-04-87
Date Completed 12-07-87

By: Claudia Hidalgo

California Water Labs, Inc.

P. O. BOX 4249
1430 CARPENTER LANE — SUITE G
MODESTO, CA 95352
PHONE (209) 527-4050

Purveyor Beta & Associates
Street 2068 Lincoln Avenue
City San Jose, CA Zip 95125
Sample I.D. 874-3-54
Collected by: Purveyor

Lab I.D. P-55231
Purchase Order Job # 202-1.1
Referring Lab _____
Date Collected 11-25-87
STAEFA CONTROL

874 TILC

Determination	Result mg/kg	State Allowable Limits mg/kg
Antimony	< 0.5	500
Arsenic	5.0	500
Barium	230.	10,000
Beryllium	< 0.5	75
Cadmium	< 1.25	100
Chromium	60.	2,500
Cobalt	13.	8,000
Copper	25.	2,500
Lead	5.0	1,000
Mercury	< 0.05	20
Molybdenum	1.0	3,500
Nickel	65.	2,000
Selenium	< 0.25	100
Silver	< 0.5	500
Thallium	< 5.0	700
Vanadium	65.	2,400
Zinc	55.	5,000

Date Received 11-30-87
Date Started 12-01-87
Date Completed 12-16-87

By: Scott Foster

California Water Labs, Inc.

P. O. BOX 4249
1430 CARPENTER LANE — SUITE G
MODESTO, CA 95352
PHONE (209) 527-4050

Purveyor Beta & Associates
Street 2068 Lincoln Avenue
City San Jose, CA Zip 95125
Sample I.D. #1W-#3
Collected by: Alan Byrum

Lab I.D. P-55288
Purchase Order Job #202-1.1
Referring Lab _____
Date Collected 12-01-87

STAEFA CONTROL

846

PRIORITY POLLUTANT METALS

<u>SUBSTANCE</u>	<u>RESULTS (mg/L)</u>
Antimony	< 0.01
Arsenic	< 0.01
Barium	0.19
Beryllium	< 0.01
Cadmium	< 0.001
Chromium	0.036
Cobalt	< 0.1
Copper	< 0.05
Lead	< 0.01
Mercury	< 0.001
Molybdenum	< 0.01
Nickel	0.01
Selenium	< 0.005
Silver	< 0.01
Thallium	< 0.1
Vanadium	0.03
Zinc	< 0.05

Date Received 12-01-87
Date Started 12-03-87
Date Completed 12-15-87

By: Scott Foster

California Water Labs Inc.

P. O. BOX 4249
1430 CARPENTER LANE - SUITE G
MODESTO, CA 95352
PHONE (209) 527-4050

Purveyor Beta & Associates
Street 2068 Lincoln Avenue
City San Jose, CA Zip 95125
Sample I.D. OH-3 @ 3.5'
Collected by: Purveyor

Lab I.D. P-55231
Purchase Order Job # 202-1.1
Referring Lab _____
Date Collected 11-25-87

STAEFA CONTROL

401 METHOD 8270

GC/MS METHOD FOR SEMI VOLATILE ORGANICS

COMPOUND	RESULT ug/kg	DETECTION LIMIT
1,3-Dichlorobenzene	ND	1000
1,4-Dichlorobenzene	ND	1000
Hexachloroethane	ND	1000
Bis (2-chloroethyl) ether	ND	1000
1,2-Dichlorobenzene	ND	1000
Bis (2-chloroisopropyl) ether	ND	1000
N-Nitrosodi-n-propyl amine	ND	1000
Nitrobenzene	ND	1000
Hexachlorobutadiene	ND	1000
1,2,4-Trichlorobenzene	ND	1000
Isophorone	ND	1000
Naphthalene	ND	1000
Bis (2-chloroethoxy) methane	ND	1000
Hexachlorocyclopentadiene	ND	1000
2-Chloronaphthalene	ND	1000
Acenaphthylene	ND	1000
Acenaphthene	ND	1000
Dimethyl phthalate	ND	1000
2,6-Dinitrotoluene	ND	1000
Fluorene	ND	1000
4-Chlorophenyl phenyl ether	ND	1000
2,4-Dinitrotoluene	ND	1000

Date Received 11-30-87
Date Started 12-04-87
Date Completed 12-11-87

By: Claydon H. H. H.

COMPOUND	RESULT ug/kg	DETECTION LIMIT
Diethylphthalate	ND	1000
N-Nitrosodiphenylamine	ND	1000
Hexachlorobenzene	ND	1000
α -BHC	ND	1000
4-Bromophenyl phenyl ether	ND	1000
γ -BHC	ND	1000
Phenanthrene	ND	1000
Anthracene	ND	1000
β -BHC	ND	1000
Heptachlor	ND	1000
δ -BHC	ND	1000
Aldrin	ND	1000
Dibutyl phthalate	ND	1000
Heptachlor epoxide	ND	1000
Endosulfan I	ND	1000
Fluoranthene	ND	1000
Dieldrin	ND	1000
4,4'-DDE	ND	1000
Pyrene	ND	1000
Endrin	ND	1000
Endosulfan II	ND	1000
4,4'-DDD	ND	1000
Benzidine	ND	5000
4,4'-DDT	ND	1000
Endosulfan sulfate	ND	1000
Endrin aldehyde	ND	1000
Butyl benzyl phthalate	ND	1000
Bis (2-ethylhexyl) phthalate	ND	1000
Chrysene	ND	1000
Benzo (a) anthracene	ND	1000
3,3-Dichlorobenzidine	ND	2000
Di-n-octyl phthalate	ND	1000
Benzo (b) fluoranthene	ND	1000
Benzo (k) fluoranthene	ND	1000
Benzo (a) pyrene	ND	1000

COMPOUND	RESULT ug	DETECTION LIMIT
Indeno (1,2,3-c,d) pyrene	ND	1000
Dibenzo (a,h) anthracene	ND	1000
Benzo (ghi) perylene	ND	1000
N-Nitrosodimethyl amine	ND	1000
Chlordane ^a	ND	3000
Toxaphene ^a	ND	3000
PCB 1016 ^a	ND	3000
PCB 1221 ^a	ND	3000
PCB 1232 ^a	ND	3000
PCB 1242 ^a	ND	3000
PCB 1248 ^a	ND	3000
PCB 1254 ^a	ND	3000
PCB 1260 ^a	ND	3000
2-Chlorophenol	ND	1000
2-Nitrophenol	ND	1000
Phenol	ND	1000
2,4-Dimethylphenol	ND	1000
2,4-Dichlorophenol	ND	1000
2,4,6-Trichlorophenol	ND	1000
4-Chloro-3-methylphenol	ND	1000
2,4-Dinitrophenol	ND	5000
2-Methyl-4,6-dinitrophenol	ND	5000
Pentachlorophenol	ND	5000
4-Nitrophenol	ND	5000

California Water Labs, Inc.

P O. BOX 4249
1430 CARPENTER LANE - SUITE G
MODESTO, CA 95352
PHONE (209) 527-4050

Purveyor Beta & Associates

Street 2068 Lincoln Avenue

City San Jose, CA Zip 95125

Sample I.D. MW #3

Collected by: Alan Byrum

Lab I.D. P-55288

Purchase Order Job # 202-1.1

Referring Lab

Date Collected 12-01-87

Page 1 of 3 STAEFA CONTROL

400 HAZARDOUS SUBSTANCE LIST (METHOD 625 - WATER)

COMPOUND	RESULTS ppb	DETECTION LIMIT
N-NITROSODIMETHYL AMINE	ND	10.0
PHENOL	ND	10.0
BIS (2-CHLOROETHYL)	ND	10.0
2-CHLOROPHENOL	ND	10.0
1,3-DICHLOROBENZENE	ND	10.0
1,4-DICHLOROBENZENE	ND	10.0
BENZYL ALCOHOL	ND	10.0
1,2-DICHLOROBENZENE	ND	10.0
2-METHYL PHENOL (O-CRESOL)	ND	10.0
BIS(2-CHLOROISOPROPYL) ETHER	ND	10.0
4-METHYLPHENOL (P-CRESOL)	ND	10.0
N-NITROSO-DI-N-PROPYLAMINE	ND	10.0
HEXACHLOROETHANE	ND	10.0
NITROBENZENE	ND	10.0
ISOPHORONE	ND	10.0
2-NITROPHENOL	ND	10.0
2,4-DIMETHYLPHENOL	ND	10.0
BIS (2-CHLOROETHOXY) METHANE	ND	10.0
BENZOIC ACID	ND	50.0
2,4-DICHLOROPHENOL	ND	10.0
1,2,4-TRICHLOROBENZENE	ND	10.0
NAPHTHALENE	ND	10.0

Date Received 12-01-87

Date Started 12-03-87

Date Completed 12-11-87

By: *Claudia Hinkel*

COMPOUND	RESULTS ppb	DETECTION LIMIT
4-CHLOROANILINE	ND	10.0
HEXACHLOROBUTADIENE	ND	10.0
4-CHLORO-3-METHYL PHENOL	ND	10.0
2-METHYLNAPHTHALENE	ND	10.0
HEXACHLOROCYCLOPENTADIENE	ND	10.0
2, 4, 6-TRICHLOROPHENOL	ND	10.0
2, 4, 5-TRICHLOROPHENOL	ND	50.0
2-CHLORONAPHTHALENE	ND	10.0
2-NITROANILINE	ND	50.0
DIMETHYL PHTHALATE	ND	10.0
ACENAPHTHYLENE	ND	10.0
2, 6-DINITROTOLUENE	ND	10.0
3-NITROANILINE	ND	50.0
ACENAPHTHENE	ND	10.0
2, 4-DINITROPHENOL	ND	50.0
4-NITROPHENOL	ND	50.0
DIBENZOFURAN	ND	10.0
2, 4-DINITROTOLUENE	ND	10.0
DIETHYL PHTHALATE	ND	10.0
FLUORENE	ND	10.0
4-CHLOROPHENYLPHENYL ETHER	ND	10.0
4-NITROANILINE	ND	50.0
2-METHYL-4, 6-DINITROPHENOL	ND	50.0
N-NITROSODIPHENYLAMINE	ND	10.0
4-BROMOPHENYL PHENYL ETHER	ND	10.0
HEXACHLOROBENZENE	ND	10.0
PENTACHLOROPHENOL	ND	50.0
PHENANTHRENE	ND	10.0
ANTHRACENE	ND	10.0
DI-N-BUTYLPHTHALATE	ND	10.0
FLUORANTHENE	ND	10.0
BENZIDINE	ND	50.0
PYRENE	ND	10.0

HAZARDOUS SUBSTANCE LIST (METHOD 625 - WATER)

Page 3 of 3

COMPOUND	RESULTS ppb	DETECTION LIMIT
BUTYL BENZYL PHTHALATE	ND	10.0
3, 3'-DICHLOROBENZIDENE	ND	20.0
BENZO (A) ANTHRACENE	ND	10.0
CHRYSENE	ND	10.0
BIS (2-ETHYLHEXYL) PHTHALATE	ND	10.0
DI-N-OCTYL PHTHALATE	ND	10.0
BENZO (B) FLUORANTHENE	ND	10.0
BENZO (K) FLUORANTHENE	ND	10.0
BENZO (A) PYRENE	ND	10.0
INDENO (1,2,3-CD) PYRENE	ND	10.0
DIBENZ (A,H) ANTHRACENE	ND	10.0
BENZO (G,H,I) PERYLENE	ND	10.0

California Water Labs, Inc.

P O. BOX 4249
1430 CARPENTER LANE — SUITE G
MODESTO, CA 95352
PHONE (209) 527-4050

Purveyor Beta & Associates
Street 2068 Lincoln Avenue
City San Jose, CA Zip 95125
Sample I.D. DH-3 @ 3.5'
Collected by: Purveyor

Lab I.D. P-55231
Purchase Order Job # 202-1.1
Referring Lab _____
Date Collected 11-25-87

STAEFA CONTROL

590

METHOD 8080

PARAMETER	RESULTS mg/kg	DETECTION LIMIT mg/kg	PARAMETER	RESULTS mg/kg	DETECTION: LIMIT mg/kg
ALPHA - BHC	ND	0.05	ENDOSULFAM II	ND	0.10
BETA - BHC	ND	0.05	ENDRIN ALDEHYDE	ND	0.10
DELTA - BHC	ND	0.05	P,P' - DDT	ND	0.10
GAMMA - BHC	ND	0.05	ENDOSULFAM SULFATE	ND	0.10
HEPTACHLOR	ND	0.05	CHLORDANE	ND	0.5
ALDRIN	ND	0.05	TOXAPHENE	ND	1.0
HEPTACHLOR EPOXIDE	ND	0.05	PCB - 1016	ND	0.5
ENDOSULFAM I	ND	0.05	PCB - 1221	ND	0.5
P,P' - DDE	ND	0.05	PCB - 1232	ND	0.5
DIELDRIN	ND	0.10	PCB - 1242	ND	0.5
ENDRIN	ND	0.10	PCB - 1248	ND	0.5
P,P' - DDD	ND	0.10	PCB - 1254	ND	0.5
			PCB - 1260	ND	0.5

Ref: Sw-846

Date Received 11-30-87
Date Started 12-03-87
Date Completed 12-06-87

By: Claudia Heibel

California Water Labs, Inc.

P. O. BOX 4249
1430 CARPENTER LANE — SUITE G
MODESTO, CA 95352
PHONE (209) 527-4050

Purveyor Beta and Associates

Street 2068 Lincoln Avenue

City San Jose, CA Zip 95125

Sample I.D. M.W. #3

Collected by: Alan Byrum

Lab I.D.

P-55288

Purchase Order Job # 202-1.1

Referring Lab

Date Collected 12-01-87

STAEFA CONTROL

538 METHOD 608

PARAMETER	RESULTS ppb	DETECTION LIMIT ppb	PARAMETER	RESULTS ppb	DETECTION LIMIT ppb
ALPHA - BHC	ND	0.05	ENDOSULFAN II	ND	0.10
BETA - BHC	ND	0.05	ENDRIN ALDEHYDE	ND	0.10
DELTA - BHC	ND	0.05	P,P' - DOT	ND	0.10
GAMMA - BHC	ND	0.05	ENDOSULFAN SULFATE	ND	0.10
HEPTACHLOR	ND	0.05	CHLORDANE	ND	0.50
ALDRIN	ND	0.05	TOXAPHENE	ND	1.00
HEPTACHLOR EPOXIDE	ND	0.05	PCB - 1016	ND	0.50
ENDOSULFAN I	ND	0.05	PCB - 1221	ND	0.50
P,P' - DDE	ND	0.05	PCB - 1232	ND	0.50
DIELDRIN	ND	0.10	PCB - 1242	ND	0.50
ENDRIN	ND	0.10	PCB - 1248	ND	0.50
P,P' - DDD	ND	0.10	PCB - 1254	ND	0.50
			PCB - 1260	ND	0.50

Date Received 12-01-87

Date Started 12-09-87

Date Completed 12-14-87

By: *Claudia Hidalgo*

REFERENCE 1a

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1.0 INTRODUCTION

Harding Lawson Associates (HLA) has been retained by Graham and James, San Francisco, to conduct an environmental assessment of the Staefa Control Systems (Staefa) property at 2481 Washington Avenue, San Leandro, California. Staefa is currently seeking to sell their 2481 Washington Avenue property (the Site). An environmental assessment was initiated in response to Staefa's desire to obtain information with regard to potential sources of organic chemicals detected in local soils and ground water. This report presents the results of HLA's environmental assessment.

2.0 SCOPE OF SERVICES

To obtain information on potential sources of chemicals previously detected at the Site, HLA, in conjunction with Graham and James, performed the following tasks between August 17 and 26, 1988.

- o Review of previous subsurface investigations conducted by Beta Associates.
- o Review of a previous environmental assessment conducted by Dames and Moore.
- o Review of regulatory agency files and records of hazardous substance investigations conducted within a one-mile radius of the Site.
- o Compilation and review of storm and sanitary sewer system maps in the vicinity of the Site.
- o Compilation and review of aerial photographs dating back to 1957.
- o Review of previous employee and neighbor interviews conducted by Graham and James.
- o Compilation and review of existing well records within one mile of the Site.
- o Summary of existing data and preparation of this report.

3.0 ENVIRONMENTAL SETTING

3.1 Site Description and History

This section presents a general description and history of the Site and surrounding areas and summarizes pertinent geologic and hydrogeologic information available at this time. The Site is an irregular-shaped plot of land of approximately 1.4 acres in San Leandro, California. The Site is bordered to the north by San Leandro Boulevard; to the east by Washington Avenue; to the south by the Rylock Company property; and to the west by the Western Pacific Railroad as illustrated on Plate 1.

The Site currently houses an 8,000 square foot building and a warehouse addition; both have been unoccupied since 1987. The remainder of the Site (north of the building) is a paved parking lot. The surface of the parking lot slopes toward the southwest corner of the Site.

The Site was originally leased by Singer-Friden, which maintained a service and mechanical repair shop for electronic equipment (calculators and postage machines) and a sales office at the Site from 1945 until 1976 (*Dames and Moore, 1987; Beta Associates, 1988; and Moothart, 1988*). These facilities were in the building currently existing at the Site.

Singer-Friden's main plant located at 2350 Washington Avenue (Singer Plant Site) and its research and development facilities (William Matthews Building Site) were north and east of the Site across Washington Avenue (Plate B-1, 1957 photograph). In 1976, Singer-Friden purchased the Site and then conveyed the property to Universal Pneumatic Control Company (UPC) that same year. UPC used the the Site to assemble small pneumatic controls used in heating, ventilation, and air conditioning. In 1978, Staefa

Control Systems acquired UPC and the property. Staefa also used the Site for small pneumatic control assembly until November 1987. The Site has been unoccupied since that time.

Inter-Coastal Paint Corporation owned and operated a chemical and paint processing and storage facility (ICP Site) directly north of the Site. The ICP Site was destroyed by fire in 1962. An auto repair shop and a portion of San Leandro Boulevard currently occupy the ICP Site.

3.2 Subsurface Conditions

In November 1987 a subsurface soils and ground-water investigation was conducted at the Site by Beta Associates (*Beta Associates, 1988*). During the investigation, three test borings were advanced to a depth of 40 feet at the Site. One soil sample was taken from each boring at a depth of 3.5 feet. The borings were completed as monitoring wells (MW-1, MW-2, and MW-3) and ground-water samples were collected from each well and chemically analyzed. Plate 2 illustrates monitoring well locations.

Boring logs from this investigation indicate that the Site is underlain by a series of silty clays and clayey silts to a depth of 40 feet. Ground water at the Site is encountered at approximately 28 to 29 feet below ground surface. The Site's stratigraphy does not indicate any aquifer materials (i.e., sands or gravels) to a depth of 40 feet below ground surface.

A licensed land surveyor was provided by HLA to survey the ground elevation at each well and the top of each well casing at the Site. Ground-water elevations were measured on August 8, 1988. Table 1 presents the ground surface and top of casing elevations, water-level depths, and water-level elevations for the three monitoring wells

at the Site. Plate 2 presents the ground-water elevations and generalized ground-water flow direction at the Site.

Results of previous soil and ground-water analyses are presented in Table 2. The solvents tetrachloroethylene (PCE) and trichloroethylene (TCE) and motor oils were detected in near-surface soils along the western and northern portions of the Site. All detectable concentrations were less than one part per million (ppm) except for PCE and motor oil in Boring DH-1 (MW-1) which had concentrations of 1.36 and 260 ppm, respectively. Ground-water analyses detected concentrations of TCE (0.222 to 0.397 ppm) and PCE (0.209 to 0.228 ppm) in MW-1 and MW-3, along the northwestern boundary of the Site and PCE (0.0126 ppm) and TCE (0.0069 ppm) at MW-2 on the eastern boundary of the Site. Cis-1,2-dichloroethene (Cis-1,2-DCE) was also detected in MW-1 and MW-3 (0.0604 and 0.0473 ppm, respectively).

4.0 CHEMICAL USAGE

For the purpose of evaluating where the chemicals that were detected in soil and ground water at the Site originated, only those operations at the Site and those hydraulically cross gradient or upgradient of the Site were considered. The following discussions include information concerning chemical use at the Singer Plant Site, the William Matthews Building Site, the ICP Site, and the Site itself. These facility locations are shown on Plate 1. The information presented herein is drawn from employee interviews conducted by Graham and James and from San Leandro Fire Department fire inspection reports.

4.1 Singer-Friden Facilities

The Singer Plant Site previously located at 2350 Washington Avenue, north and east of the site, housed a manufacturing plant that fabricated adding machines and cash registers from the mid-1940s to 1976. The facility covered approximately 8 acres and employed 3,000 persons during peak operation (*Moothart, 1988*). Plates 1, B-1 and B-3 (Appendix B) illustrate the Singer Plant Site location prior to its demolition. Plate C-1 (Appendix C) illustrates the Singer Plant Site and locates specific chemical use operations inside the facility. Friden operated the manufacturing facility until 1965, when Singer purchased the facility. A parts assembly facility associated with the main Singer Plant Site was built in 1950 at the Site (2481 Washington Avenue) (*Moothart, 1988*). An engineering laboratory and electroplating facility was located where the William Matthews Building now exists (Plate 1), east of the Site and south of the Singer Plant Site (*Dames & Moore, 1987*).

A wide range of chemicals were used at the Singer Plant Site from 1945 to 1976 and were associated with parts cleaning and washing operations (TCE and other

solvents), plating (chromic and hydrochloric acids, TCE and trichloroethane [TCA]), circuit board etching and stripping (hydrochloric acid), heat treatment (cyanide and salts), milling shops (various oils), painting shop (paints and thinners), and screw machine shops (TCE, TCA and various oils) (*Foster, 1988; Morris, 1988; Moothart, 1988 and Burkhardt, 1971*). A 1971 memorandum (Appendix A) lists chemicals used at the Singer Plant Site at that time. Large quantities of chemicals and solvents, including TCE, were also used at the plating shop (*Foster, 1988 and Moothart, 1988*).

As a general practice, the waste solvents and acids from the plating and circuit board stripping operations were collected in a 12 foot long by 6 foot wide and 6 foot deep catch-basin in the center of the facility (*Foster, 1988*). This basin was used to separate the particulates from the waste stream. The liquid portion of this waste was discharged to a 12-inch sanitary sewer main which connected to the City of San Leandro Sanitary District system along Washington Avenue (*Foster, 1988*). A second sewer main (6-inch) also left the facility and connected into the San Leandro Sanitary District on Washington Avenue.

An additional waste collection area was located at the loading dock along the Singer Plant Site's southeast side (*Foster, 1988*). Waste oils and solvents (TCE) from the parts washing and punch-press rooms were included in this waste stream and were collected at this waste collection area. The waste solvents were collected in a catch basin and removed once a year by A-1 Septic Company (Castro Valley) (*Foster, 1988*). The waste oils were collected in a 300-400 gallon tank that was periodically emptied by a waste recycling company (*Foster, 1988 and Morris, 1988*).

As previously discussed, the plating shop used large quantities of acids (hydrochloric and chromic) and solvents (TCE and TCA) (*Foster, 1988, Morris, 1988, and Moothart, 1988*). The plating shop wastes were collected in floor drains below the

elevated grated floor (*Moothart, 1988*). It was reported that the piping and machinery in the plating shop were "torn apart" and replaced each year (*Foster, 1988*). What was reported as drain and floor corrosion (*Foster, 1988*) is typical of many plating operations during that time period. Highly corrosive plating wastes can create holes and deterioration in sewer lines, drain lines and floors. As a result, many plating operations are sources of uncontrolled chemical discharges.

4.2 Inter-Coastal Paint Corporation

Inter-Coastal Paint Corporation (ICP) owned and operated a chemical and paint processing and storage facility at 2411 Washington Avenue (ICP Site), directly northwest of the Site (*Dames and Moore, 1987 and Pacific Aerial Surveys, 1988*). Due to its better resolution, Plate B-2, Appendix B best depicts the ICP Site. ICP used and stored hexane (10,000-gallon tank), naphtha (8,000-gallon tank), lubricating oils (20,000-gallon tank), rust preventative (6,500-gallon tank), mineral spirits (10,000-gallon tank and 250-gallon tank), tar, varnish, rosins, paraffin, and Standard Oil #200 solvent (20,000-gallon tank) at this facility. These chemicals were stored in a yard along the Site's northern property boundary (*Jannson, 1962, and Neves, 1962*; also see Appendix D, Fire Report and *Pacific Aerial Surveys, 1988*).

On September 12, 1962, a violent explosion and fire destroyed most of the ICP Site facility. The explosion killed 2 persons and injured 17 others, spreading flames over an area nearly 250 feet in diameter (*Jannson, 1962 and Neves, 1962*). Fire Departments from the Cities of San Leandro, Ashland, San Lorenzo, and Hayward, along with Alameda County Fire Patrol and Alameda County Civil Defense responded to the fire. The cause of the fire was not determined; however strong solvent odors were detected in the building just prior to the explosion (*Neves, 1962*).

The explosion/fire report (Appendix D) indicates that foam and water were used to extinguish "an undetermined flowing liquid" inside the building. In addition to the water used to extinguish the fire, a water main was broken as a result of the explosion and discharged an unknown volume of water to the area. The water from the broken water main, the hosing operations, and the flowing liquids were apparently not contained during or after the fire (*Jannson, 1962*). It is likely that this water carried chemicals off the ICP Site and may have transported chemicals onto the Site.

The 1963 aerial coverage (Plate B-3) shows the former location of the ICP Site facility and the destroyed homes to the north of the ICP Site. The explosion and fire resulted in the widespread dispersion of chemical barrels, debris, liquids and extinguishing water around the ICP Site (*Jannson, 1962 and Neves, 1962*; see also Appendix D, Fire Report). It is likely that the debris and liquids spread onto the Site, to the south.

4.3 Staefa Control Systems/Universal Pneumatic Control (UPC)

At this time there is evidence of only minor chemical usage at the Site. Singer-Friden's chemical usage at the Site is unknown. Interviews with employees indicate that the chemical usage of Staefa and UPC at the Site consisted of no more than a few gallons of alcohol (1 pint per month to 1 gallon per year) to clean small parts, ammonia (2 to 3 gallons per month) for a blueprint machine, and a gallon per year to a gallon per month of chlorinated solvents for bonding plastic parts. The plastic bonding was conducted using Q-tips, all of the solvent was "used up" (evaporated) during this operation and never required disposal (*Moothart, 1988*). Records of the solvent storage and use have not yet been located. However, former employees recall that either TCE, TCA or dichloroethene (DCE) were used in small amounts (*Ginn, 1988; Moothart, 1988*;

and Morris, 1988). Quantities of these solvents used at Staefa or UPC were estimated to be from a gallon per year to a gallon per month, until 1981 when a sonic welding apparatus replaced the solvent bonding process (*Ginn, 1988; Morris, 1988*).

5.0 AERIAL PHOTOGRAPH REVIEW

HLA reviewed aerial photographs on file at Pacific Aerial Surveys for the years 1957, 1959, 1963 and 1986 (*Pacific Aerial Surveys, 1988*). Copies of these photographs are included in Appendix B. These photographs document a long history of industrial development adjacent to the Site.

The Singer Plant Site is shown in the 1957 photograph, Plate B-1 (Appendix B), and occupied more than 8 acres of land northeast of the Site. The photographs from 1957 and 1963 indicate a dark stained area at the southern side of the Singer Plant Site that coincides with the reported waste-oil catch basin and oil recycling loading dock (*Moothart, 1988, and Foster, 1988*).

It was reported that the Singer Plant Site had a water supply well adjacent to the 250,000 gallon water tank along its southern border that supplied water used at the Singer Plant Site (*Moothart, 1988*) (Plate B-1). Plate B-1 also shows the location of the Trailer Haven Auto Court water supply well near the southeast portion of the Singer Plant Site.

The 1959 photograph, Plate B-2 (Appendix B), has better resolution and clearly shows the ICP Site drum and tank storage yard at the southwest corner of the ICP Site property. This storage area contained five large storage tanks (8,000 to 20,000 gallons) and what appeared to be drums and several smaller storage tanks. The storage yard and tank area are the storage location of the various chemicals previously discussed in Section 4.2.

The 1963 photograph, Plate B-3 (Appendix B), shows the former location of the ICP Site and the destroyed home to the north. The ICP Site facility no longer exists in this aerial coverage. This evidence is consistent with the reported explosion and fire

that destroyed the ICP Site facility and a number of homes to the northwest of the ICP Site in 1962 (*Jannson, 1962, and Neves, 1962*).

At the Site, the aerial coverages from 1957 and 1959 show what appears to be an area of disturbed land north of the original building and adjacent to the Southern Pacific Railroad right-of-way. The nature of the disturbed area and the site activities that produced it are uncertain. By 1963, the disturbed area was no longer evident (Plates B-3 and B-4, Appendix B). It should be noted that the Site was occupied and operated by Singer-Friden from 1950 until 1976.

6.0 POTENTIAL MIGRATION PATHWAYS

This section is a discussion of potential chemical migration pathways in the vicinity of the Site, including surrounding sanitary and storm sewer systems, trenches, natural geologic formations, and past waste management practices.

6.1 Utilities

Review of existing utilities in the vicinity of the Site indicates that storm drain and sanitary sewer systems are present along Washington Avenue. The trenches for these systems can provide pathways and diversions for liquid contaminants and localized ground-water flow because the backfill materials used in the trenches are often much more permeable than the surrounding native soils. Review of the existing utility system layout indicates that the City of San Leandro maintains storm and sanitary sewer systems at the Site (Plates 3 and 4). The San Leandro sanitary sewer system (Plate 3) flows northwest along Washington Avenue and serves the Singer Plant Site (*City of San Leandro Department of Public Works, 1988*). The storm drain in this same area (Plate 4) flows to the southeast and serves both the Singer Plant Site and the Site (*City of San Leandro Department of Public Works, 1988*).

Review of additional utilities from the Oro Loma Sanitary District (Plate 5) shows a sanitary sewer that serves the area east of the Site from the San Leandro Boulevard/Washington Avenue intersection south (*City of Oro Loma Sanitary District, 1988*). This system flows to the southeast along Washington Avenue.

Review of invert elevations of the storm drain pipe running down Washington Avenue shows that flow in the pipe (and likely in the surrounding trench as well) is to the south-southeast from the Singer Plant Site past the Site. The San Leandro sanitary sewer system that serves the Singer Plant Site (the same system that reportedly received

large volumes of waste solvents and chemicals) locally flows to the northwest along Washington Avenue; however, because the Washington Avenue storm drain pipe is deeper than the sanitary pipe and because the trenches are likely interconnected, contaminated water infiltrating to the trench backfill system along Washington Avenue would likely flow to the south-southeast along the base of the deepest trench.

Typically, sanitary sewer and storm drain systems are subject to failure and leakage especially when large volumes of acids and solvents are frequently carried in the pipes. If acids and solvents were disposed of into the sanitary sewers as reported, and leakage occurred, these chemicals could migrate along the trench system. They would likely follow the San Leandro storm drain trench since it has the lowest elevation of the trenches along Washington Avenue. Thus, the chemicals reportedly poured into the sanitary sewers at the Singer Plant Site could enter the San Leandro storm drain trench system, and migrate south toward the Site. These chemicals could subsequently impact ground water and soils along the trench system's length, which is along the upgradient side of the Site.

6.2 Explosion and Fire at Inter-Coastal Paint Corporation

The ICP Site explosion and fire may have provided pathways for contaminant movement onto the Site. The 1962 explosion and fire at the ICP Site dispersed paints, thinners, solvents, and oils and "undetermined flowing liquids" over a large area (*Jannson, 1962 and Foster, 1988*). The impact zone of the explosion extended at least 200 to 300 feet north (housing development) and east (Singer Plant Site) of the ICP Site, causing extensive fire damage (*Jannson, 1962; Neves, 1962; Foster, 1988*). The explosion likely spread chemicals stored at the ICP Site over the Site. The explosion/fire report (Appendix D) indicates that foam and water were used to extinguish "an undetermined

flowing liquid" inside the building. In addition to the water used to extinguish the fire, a water main was broken as a result of the explosion and discharged an unknown volume of water to the area. These liquids would likely have migrated off the ICP Site and potentially impacted soils and ground water at the Site.

6.3 Hydrogeologic Pathways

The limited amount of subsurface information at the Site indicates that the soils are primarily silts to a depth of about 40 feet below ground surface. There are unsaturated coarse-grained soils at the surface extending to a depth of about 4 feet, which were reported to be fill materials (*Beta Associates, 1988*). Water was encountered in on-site test borings at approximately 28 to 29 feet below ground surface. Data from the three borings advanced at the Site do not indicate the presence of a well-defined aquifer to a depth of 40 feet below ground surface (*Beta Associates, 1988*).

A cross section included in the Remedial Investigation Phase I Report for Factor Avenue (*CH₂M Hill, 1987*) shows two coarse-grained strata shallower than 55 feet in the general area of the Site. One occurs about 10 to 20 feet below ground surface and is unsaturated; the second occurs about 45 feet below ground surface and is saturated. The deeper sand is likely the shallowest aquifer near the Site. The coarse-grained materials comprising this aquifer would provide preferential pathways for ground-water and chemical migration.

Wells within or adjacent to contaminant plumes can also act as conduits for contamination migration depending on well completion, integrity, and operation. The water supply wells at Trailer Haven Auto Court and the Singer Plant Site, and other wells discussed in Section 8.0 of this report, may have acted as preferential pathways for ground-water and chemical migration.

7.0 POTENTIAL CONTAMINANT SOURCE AREAS

After reviewing aerial photographs, plant drawings, employee interview records, and City of San Leandro Fire Department Reports, HLA has identified several areas in the vicinity of the Site that may be source areas for chemicals detected at the Site.

7.1 Singer-Friden Facilities

The large Singer-Friden manufacturing facility (Singer Plant Site) northeast of the Site is illustrated on Plates B-1 and C-1 (Appendices B and C). The following operations and facilities were maintained at the Singer Plant Site from 1945 to 1976: painting (paints and paint thinners), plating (chromic and hydrochloric acids, TCE and TCA), parts cleaning and washing (TCE and other solvents), waste oil catch basins (lubricating and milling oils), solvent and acid catch basins (TCE, TCA and other solvents, and acids), and circuit board etching and stripping (hydrochloric acid) (*Foster, 1988; Moothart, 1988 and Morris, 1988*). Plate C-1 (Appendix C) shows the reported location of each of these areas. Chemicals reportedly disposed of into the sewer system at the Singer Plant Site may have leaked into the utility trenches. Because the Singer Plant Site was located at the upgradient end of the utility trenches that pass the Site, the Singer Plant Site is a potential source for chemicals detected in ground water at the Site. At this time, there are no soils data available from the Singer Plant Site, nor are there any ground water quality data from the reported Singer Plant Site water supply well.

7.2 Inter-Coastal Paint Corporation

The ICP Site located north and cross gradient of the Site maintained a large volume of organic solvents, tars, rosins, and oils. Aerial photography and City of San Leandro Fire Department Reports document this chemical storage (*Jannson, 1962 and Pacific Aerial Surveys, 1988*). Previous discussions (Section 4.2) concerning the

explosion and fire that took place at the ICP Site in 1962, identify this property as a potential source of chemicals found at the Site. At this time, there are no chemical data for soils or ground water at the ICP Site.

7.3 2481 Washington Avenue Site

Dames and Moore (1987) reported that until at least 1950 one above ground oil storage tank was apparently located in the area where the warehouse at the Site now exists. Employee interviews and past site investigations have not indicated significant historical chemical use history at the Site. As previously discussed in Section 4.3, former employees recall that either TCE, TCA, or DCE were used in small amounts at the Site. These quantities were estimated to be from a gallon per year to a gallon per month. In addition to the small chemical use, aerial photograph coverage indicate an area of disturbed land at the Site; however, it is uncertain as to the nature of activities that produced this disturbed land.

8.0 LOCAL WELLS USED FOR WATER SUPPLY, IRRIGATION AND WATER QUALITY MONITORING

Review of existing well records in the vicinity of the Site indicate that there are over 1,000 wells in the San Leandro vicinity (*Pintal, 1988*). Of particular interest are the two water supply wells upgradient and northeast of the Site (see Plate B-1). The first of these was a reported water supply well located at the previous Singer Plant Site (*Moothart, 1988*). This well reportedly supplied all water used at the Singer Plant Site. The second well is an operating drinking water supply well located at the **FX-9 Wells**

[REDACTED] This well is 290 feet deep and has been in operation since 1956, yielding approximately 75 gallons per minute (*Barrigan, 1988*). In addition to these wells, there were four reported shallow wells along **FX-9 Wells**, but no information is available regarding their purpose or location (*Ginn, 1988*). There are additional wells in the area, most of which are used for irrigation (*Pintal, 1988*), and there are three monitoring wells at the Site.

No organic ground-water quality data were available from the old Singer Plant Site wells, irrigation wells, or the Trailer Haven Auto Court well.

9.0 CONCLUSIONS

After review of previous investigations, regulatory agency files, storm and sanitary sewer system maps, aerial photographs, and employee interviews, the following conclusions have been drawn regarding the site conditions and past chemical use at and around the Site.

- o There is no evidence of significant historic chemical usage or storage at the Site. This indicates that the organic chemicals detected on site in soils and ground water originated off the Site and do not appear to be related to Staefa/UPC activities at the Site.
- o The potential source areas on and off site include:
 - The former Singer Plant Site at 2350 Washington Avenue where large volumes of chemicals and solvents including TCE were used in the manufacturing processes. Interviews with plant personnel indicate waste solvents and acids were released to the sanitary sewer system on a routine basis.
 - The former Inter-Coastal Paint Corporation Site just north of the Site. This operation used large volumes of Standard Oil #200 solvent, hexane, naphtha, lubricating oils, mineral spirits, tar, varnish, paraffins, and rosins.
 - The area of disturbed land (evident in the pre-1963 aerial photographs) north of the main building and adjacent to the railroad right-of-way at the Site. It is uncertain as to the nature of the activities that produced this area.
- o The potential migration pathways to the Site include:
 - The utility trench system. The utility trench system that exists beneath Washington Avenue contains sanitary sewer and storm drain pipes. The deepest component of this trench system is the storm drain which flows to the southeast. This trench system would likely cause chemicals leaked from the sanitary sewer at the Singer Plant Site to migrate toward the Site and potentially impact soil and ground-water quality along the trench's length.
 - The fire and explosion at the ICP Site. In 1962, the ICP Site adjacent to the Site experienced a violent explosion and fire causing damage 200 to 300 feet away. Flying barrels and debris started fires at adjacent properties. Six fire departments responded to this catastrophe using water and foam to control the fire and "undetermined flowing liquids" encountered at the fire

site. Liquids released at The ICP Site during the explosion and fire would likely have migrated off the ICP Site and potentially impacted soils and ground-water quality at the Site.

- o An active water supply well is being used by the FX-9 Wells

No organic chemical data for ground water from these wells were available during our data review. There is a potential for these wells to act as conduits for chemical movement and to cause endangerment and risk to public health and/or the environment.

10.0 REFERENCES

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- CH₂M Hill, 1987. *Remedial Investigation Phase I Report - 750 139th Avenue, San Leandro, California.*
- City of Oro Loma Sanitary Sewer District, 1988. Sanitary Sewer System Drawings.
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- Pintal, F., 1988. County of Alameda - Public Works Agency. Personal Communication between Mr. Fred Pintal and HLA, and HLA Review of Well Drillers Reports.

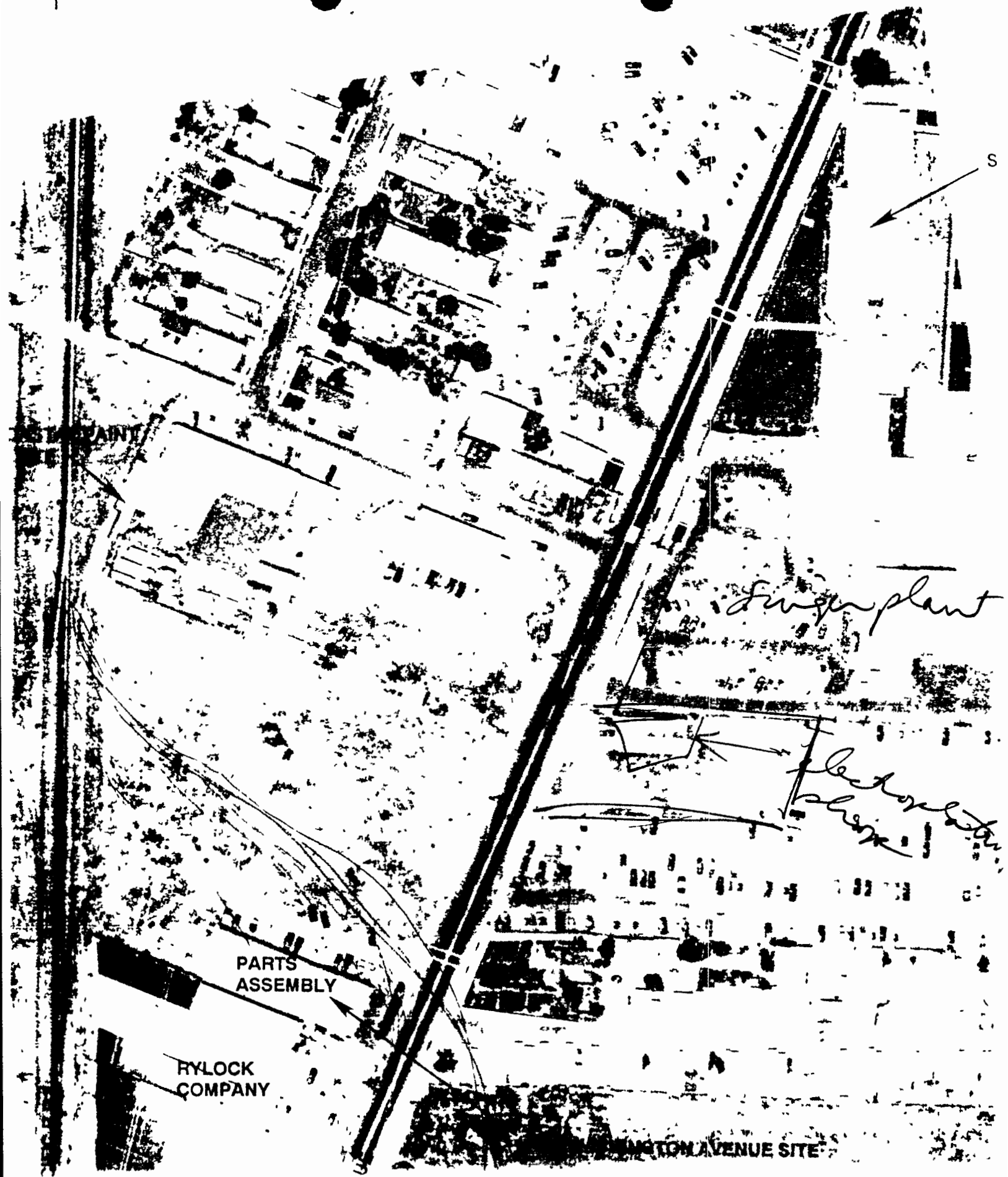
Destroyed building was 90 feet by 165 feet located to the rear of a 200 foot by 400 foot lot. 200 feet back from Washington Avenue and adjacent to Cherry Street. In a combination industrial and residential neighborhood.

Flammable liquids included 10,000 tank of hexane, 8000 gallon tank of naptha , two 20,000 gallon tanks of lube oil, 6500 gallon tank of rust preventive. paraffins, tar, varnish, resins, liquid rubber and various other flammable products used in processing paints, mastics and automobile undercoater. The plant contained various tanks, pumps and mixing machines in addition to the storage of raw material and finished products.

The cause of the explosion was possibly from the mal function of processing equipment or improper operation, causing spread of flammable vapors to a source of ignition. Now under investigation by the fire prevention inspectors.

W. Marshall T. Parmelee

9



PAINT

Singer plant

electronic plant

PARTS
ASSEMBLY

RYLOCK
COMPANY

MINGTON AVENUE SITE



HLA

Map

PAWN

REFERENCE - 2

CONTACT REPORT

AGENCY: Alameda County Assessor's Office

ADDRESS: Oak St., Oakland, CA

PERSON

CONTACTED: Steven Hunter

PHONE NO.: (415) 272-3727

FROM: Arun Roy

TO: File

DATE: 4-8-88

SUBJECT: Ownership History

CC:

I called the Assessor's Office and reached Mr. Hunter and asked him about the Staefa Control System's site. He said the property was sold to Universal Pneumatic Controls in 1976 by Singer-Friden. The prior owner was the City of San Leandro, since 1963.

REFERENCE *2a*

TRW

- REAL ESTATE INFORMATION SERVICES -

1-800-527-9663

PARCEL LIST	ALAMEDA	1988-89	PAGE 15,996
075 0084 011	OWNER ADDRESS (*-MAIL, #-PROP LOC, -=SAME) PROPERTY DESCRIPTION	ZIP	DOCUMENT DATE / NO. SALE DATE / AMOUNT
TRA			ASSESSED VALUES /TAXES
075 0084 011	DEZOTTE ARTHUR J JR & KATHERINE R * 1738 VIA CHORRO, SAN LORENZO CA 10003 # 2340 CHERRY ST, SAN LEANDRO SUBDIV. MAP 23 PG 65 BLK B LT 16 -- SINGLE FAMILY RESIDENTIAL --	94577	11/13/85 85 243340 USE-11 47,913 LND 26,738 IMP 74,651 NET 940.84 /87
075 0084 012	DIRKSON MARTHA N * 2334 CHERRY ST, SAN LEANDRO CA 10003-- SINGLE FAMILY RESIDENTIAL --	94577	5/03/73 73 060002 USE-11 15,627 LND 8,326 IMP 7,000-HO 16,953 NET 345.70 /87
075 0084 014 05	UNIVERSAL PNEUMATIC CONTROLS INC * 2481 SAN LEANDRO BLVD, SAN LEANDRO CA 10003-- OFFICE BLDG (1-5 STORIES) --	94577	7/30/76 76 125664 USE-94 87,352 LND 169,700 IMP 257,052 NET 2,814.00 /87
075 0084 015 02	RYLOCK CO * P O BOX 766, UNION CITY CA 10003 # 2485 WASHINGTON AVE, SAN LEANDRO -- HEAVY INDUSTRIAL --	94587	USE-43 147,560 LND 121,429 IMP 268,989 NET 2,951.28 /87
075 0084 017	SAN FRANCISCO BAY AREA RAPID TRANSIT DISTRICT * NO MAILING ADDR FOR THIS OWNER 10003 # WASHINGTON AVE, SAN LEANDRO -- EXEMPT PUBLIC AGENCIES --		3/02/66 AY-027435 USE-03 LND
075 0084 018	CITY OF SAN LEANDRO * NO MAILING ADDR FOR THIS OWNER 10003 # SAN LEANDRO BL, SAN LEANDRO -- EXEMPT PUBLIC AGENCIES --		USE-03 LND
075 0084 019 04	ANDRADE W B & AUDRA M & JOAQUIN HELEN P & T L TRS * 15741 VIA ARROYO, SAN LORENZO CA 10003 # 2411 WASHINGTON AVE, SAN LEANDRO -- WAREHOUSE --	94580	4/11/86 86 087461 USE-41 148,582 LND 20,519 IMP 169,101 NET 1,862.08 /87
075 0085 001	LOURA MANUEL F & ROSA P * 331 HARLAN ST, SAN LEANDRO CA 10003 # 2201 CHERRY ST, SAN LEANDRO SUBDIV. MAP 23 PG 65 BLK C LT 1 -- DUPLEX --	94577	8/03/76 76 126924 USE-25 PHN-(415) 352-2126 25,732 LND 17,729 IMP 43,461 NET 783.72 /87
075 0085 002	LUCIANO ANNIE * 1713 E 14TH ST, SAN LEANDRO CA 10003 # 2213 CHERRY ST, SAN LEANDRO SUBDIV. MAP 23 PG 65 BLK C LT 2 -- SINGLE FAMILY RESIDENTIAL --	94577	11/08/82 82 170314 USE-11 55,647 LND 17,224 IMP 72,871 NET 922.48 /87
075 0085 003	MAGANO MANUEL O & ANTONIO J * 2219 CHERRY ST, SAN LEANDRO CA 10003 SUBDIV. MAP 23 PG 65 BLK C LT 3 -- DUPLEX --	94577	7/25/84 84 150444 USE-22 23,194 LND 25,647 IMP 160 H/P 49,001 NET 604.24 /87
075 0085 004	GIANNIKOS ARGEREOS & EFROSINI * 3770 ANZA WAY, SAN LEANDRO CA 10003 # 2227 CHERRY ST, SAN LEANDRO SUBDIV. MAP 23 PG 65 BLK C LT 4 -- SINGLE FAMILY RESIDENTIAL --	94578	6/13/86 86 139905 USE-11 66,898 LND 42,864 IMP 109,762 NET 1,302.48 /87

B 14

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- REAL ESTATE INFORMATION SERVICES -

1-800-527-9663

PARCEL LIST	ALAMEDA	1988-89	PAGE 15,997
075 0085 005	OWNER ADDRESS (*-MAIL, #-PROP LOC, -=SAME) PROPERTY DESCRIPTION	ZIP	DOCUMENT DATE / NO. SALE DATE / AMOUNT
TRA			ASSESSED VALUES /TAXES
075 0085 005	ENOS ADELINE A * 2241 CHERRY ST, SAN LEANDRO CA 10003 SUBDIV. MAP 23 PG 65 BLK C LT 5 -- SINGLE FAMILY RESIDENTIAL --	94577	1/27/81 81 013506 USE-11 PHN-(415) 357-9359 15,499 LND 8,838 IMP 7,000-HO 17,337 NET 349.66 /87
075 0085 006	HONNIBALL LESLIE * 2245 CHERRY ST, SAN LEANDRO CA 10003 SUBDIV. MAP 23 PG 65 BLK C LT 6 -- SINGLE FAMILY RESIDENTIAL --	94577	2/03/86 86 031327 USE-11 49,384 LND 54,136 IMP 7,000-HO 96,520 NET 1,165.24 /87
075 0085 007	TORRES LAWRENCE J * 2251 CHERRY ST, SAN LEANDRO CA 10003 SUBDIV. MAP 23 PG 65 BLK C LT 7 -- SINGLE FAMILY RESIDENTIAL --	94577	7/17/81 81 119423 USE-11 24,289 LND 44,300 IMP 7,000-HO 61,589 NET 805.46 /87
075 0085 008	LEAL CLARA P * 2260 CHERRY ST, SAN LEANDRO CA 10003 # 2259 CHERRY ST, SAN LEANDRO -- SINGLE FAMILY RESIDENTIAL --	94577	9/06/78 78 172344 USE-11 PHN-(415) 357-5093 13,962 LND 8,326 IMP 22,288 NET 401.50 /87
075 0085 009 01	MACKIN T P & ELAINE M & BEASTON R M & BARBARA * 2265 CHERRY ST, SAN LEANDRO CA 10003 SUBDIV. MAP 23 PG 65 BLK C LT 9 -- DUPLEX --	94577	4/09/76 76 054433 USE-22 35,951 LND 25,609 IMP 14,000-HO 47,560 NET 824.22 /87
			9/07/83 83 122501 59,316 LND

See

Parcel #

075008401405

Universal Pneumatic

i.e. 2481 San Leandro Blvd
corner lot

ASSESSOR'S MAP 75

Code Area Nos. 10-003

84

PAGE 2

Rev. 10-31-77 AM 100%

Rancho San Leandro. (Pat Blk 16)

J. Estudillo
Scale: 1"=100'

CHERRY ST.

LOGUAT
(ORCHARD) LANE

84

84

HUDSON LANE

San Leandro Blvd.

WESTERN

PACIFIC

RAILROAD

WATKINS ST.

WASHINGTON

BOOK 77

BOOK 77D

BOOK 77D

BOOK 77B

(WEST AVE 137) (SECOND AVE)

87

87

86

16

CITY
2100 ±
(P)

(19-4)
1.52 Ac. ± (P)

(14-5)
1.56 Ac. ± (P)

(2.0 AC ±)
(15-2)
1.89 Ac. ± (C)

2411

248

2495

10-003

90
N75

80
N75

San Leandro Blvd.

REFERENCE - 3

FX-9 Wells

Township, Range
2S, 3W

24 12 (9 dom)

23 5 (1 dom)

Section 22 1/2=5

27 17 1 dom

26 27 1 dom

25 20 (10 dom)

Staefa Control Systems

Wells w/in 3 mi

2S, 2W

Section 29 0
30 3
31 4 wells 1 dom
19 0 4 wells
20 0

3S 2W

5 9 1 dom

6 33 1 u

6 dom 7 26 5 u

7 dom

5 dom

368 (45 domestic)
mostly
irrigation

2S, 3W

36

well
6 dom (1 dom 75 GPM) 36 L4 irr 152 ft 20 ft 8-79
4 ind Qind 100 50 ft 36 M1 dom 38 ft 9-53

1 mi 3 mi NW of site

2S, 3W

14

Township #wells

(36) 38

35 28

34 128

38 2/3=5

4 1

3 0

2 0

1 1 1 dom

Section

Wells w/in 3 mi of
Staefa Control Systems
2481 San Leandro Blvd.

368
128
496

ALAMEDA COUNTY -- BAY PLAIN GROUNDWATER STUDY -- WELL INVENTORY REPORT

WELL NUMBER	DATE (MO/YR)	SURFACE ELEV. (FT)	TOTAL WELL DEPTH (FT)	DEPTH TO WATER (FT)	DTW (MSL)	WELL USE	LOG	WQ	WL	YIELD (GPM)
2S/3W 35J 2	1/09	0	300	0	0	IND	?	0	0	0
2S/3W 35J 3	1/46	0	100	21	0	DOM	?	0	1	0
2S/3W 35K 1	1/56	0	35	0	0	IRR	?	0	0	0
2S/3W 35K 2	1/56	0	27	17	0	IRR	?	0	1	0
2S/3W 35L 1	?	32	100	0	0	IRR	?	0	0	0
2S/3W 35L 2	1/52	0	33	16	0	IRR	?	0	1	0
2S/3W 35L 3	1/53	0	40	0	0	IRR	?	0	0	0
2S/3W 35M 2	1/54	0	63	0	0	IRR	?	0	0	0
2S/3W 35N 1	1/00	0	40	10	0	DOM	?	0	1	0
2S/3W 35N 2	1/15	0	47	0	0	DOM	?	0	0	0
2S/3W 35P 1	9/78	0	351	15	0	IRR	D	0	0	0
2S/3W 36A 1	9/77	0	67	37	0	IRR	D	0	0	0
2S/3W 36A 2	8/77	0	65	0	0	IRR	D	0	0	0
2S/3W 36A 3	5/77	0	40	33	0	IRR	D	0	0	0
2S/3W 36B 1	1/53	0	53	0	0	IRR	?	0	0	0
2S/3W 36B 2	1/54	0	52	0	0	IRR	?	0	0	0
2S/3W 36C 1	1/57	0	62	0	0	IRR	?	0	0	0
2S/3W 36C 2	?	0	58	29	0	IRR	?	0	1	0
2S/3W 36D 1	1/28	0	65	0	0	DOM	?	0	0	0
2S/3W 36D 2	1/43	0	90	0	0	IRR	?	0	2	0
2S/3W 36E 2	1/19	0	161	50	0	IND	D	0	0	0
2S/3W 36E 4	1/19	0	80	50	0	IND	?	0	0	0
2S/3W 36F 1	7/56	0	290	34	0	DOM	D	1	0	0
2S/3W 36G 1	?	0	175	0	0	IRR	?	0	2	0
2S/3W 36H 1	?	0	0	0	0	IRR	?	0	0	0
2S/3W 36H 3	10/77	0	82	38	0	IRR	D	0	0	0
2S/3W 36H 4	11/77	0	88	37	0	IRR	D	0	0	0
2S/3W 36J 1	1/24	0	94	19	0	DOM	?	0	1	0
2S/3W 36K 1	?	0	147	0	0	IRR	D	1	0	0
2S/3W 36K 2	4/51	0	432	27	0	IRR	D	Y	0	0
2S/3W 36K 3	1/44	0	84	0	0	DOM	?	0	2	0
2S/3W 36K 5	9/77	0	43	15	0	IRR	D	0	0	0
2S/3W 36K 6	4/77	0	80	25	0	IND	D	0	0	0
2S/3W 36L 1	8/45	44	120	28	19	IRR+	D	1	+	0
2S/3W 36L 2	6/50	0	129	0	0	IRR	D	0	0	0
2S/3W 36L 4	8/79	0	152	21	0	IRR	D	0	0	0
2S/3W 36L 5	8/85	0	28	18	0	MON	G	0	0	0
2S/3W 36M 1	9/53	0	104	38	0	DOM	D	1	0	0
2S/3W 36M 2	8/56	48	308	22	26	IND+	D	1	+	0
2S/3W 36P 1	3/77	0	99	17	0	IND	D	0	0	0
2S/3W 36Q 2	?	39	289	0	0	IRR	?	0	7	0
2S/3W 36Q 3	1/54	0	62	0	0	DOM	?	0	0	0
2S/3W 36Q 4	6/77	0	35	12	0	IRR	D	0	0	0
2S/3W 36Q 5	9/77	0	72	22	0	IRR	D	0	0	0
2S/3W 36Q 6	10/77	0	60	26	0	IRR	D	0	0	0
2S/3W 36Q 7	5/82	0	152	14	0	IRR	D	0	0	0
2S/3W 36R 2	6/77	0	53	21	0	IRR	D	0	0	0
2S/3W 36R 3	5/77	0	58	18	0	IRR	D	0	0	0
2S/3W 36R 4	6/77	0	61	21	0	IRR	D	0	0	0
2S/4W 2K 1	1/05	0	37	42	0	IND	?	0	2	0
2S/4W 2R 1	9/87	0	565	0	0	IRR	E	0	0	0

REFERENCE *3a*

CONTACT REPORT

AGENCY: Alameda County Public Works

ADDRESS: Oakland, CA

PERSON

CONTACTED: Calvin Hickenbottom

PHONE NO.: (415) 670-5480

FROM: Dick Jones

TO: File

DATE: 8-16-88

SUBJECT: Groundwater Use in Staefa site area

CC:

I told Mr. Hickenbottom that we were doing potential hazardous waste site assessments and needed information about groundwater use and municipal wells in the San Leandro - Hayward area. He said most water was imported in this area. Exceptions are the Alameda Water District serving Fremont and Union City, (which uses groundwater to recharge the aqueduct water), a very few domestic systems and only three or four small systems in unincorporated areas (Morland in Hayward and Trailer Haven in San Lorenzo, 160 hookups).

San Leandro is served by the East Bay Municipal Utility District which imports and blends its water. (Historically, there was a well off of Davis St. in San Leandro). West Hayward gets its water from the City of San Francisco's Hetch Hetchy Reservoir supply. However, Hayward used groundwater until 1962 and was again considering its use in an emergency.

REFERENCE - 4

A122: 1

READY

State Population 1975-2000

A	B	C	D	E	F	G	H
103	1	171	409100	2,409			
104	1	171	409200	2,810			
105	1	173	409300	4,219			
106	1	173	409400	3,315			
107	1	173	409500	2,724			
108	1	497	409600	4,418			
109	1	497	409700	4,686			
110	1	154	409800	3,355			
111	1	153	409900	4,918			
112	1	153	410000	3,139			
113	1	498	410100	2,452			
114	1	498	410200	2,930			
115	1	498	410300	3,098			
116	1	498	410400	3,104			
117	1	125	420100	2,232			
118	1	125	420200	2,157			
119	1	126	420300	3,423			
120	1	126	420400	2,570			
121	1	125	420500	1,936			
122	1	125	420600	2,925			

19-Aug-88 10:39 AM

A207: 1

READY

A	B	C	D	E	F	G	H
188	1	174	432100	3,310			
189	1	174	432200	3,397			
190	1	175	432300	2,807			
191	1	170	432400	4,754			
192	1	499	432500	6,341			
193	1	175	432600	5,036			
194	1	174	432700	2,496			
195	1	180	432800	3,772			
196	1	180	432900	546			
197	1	180	433000	3,307			
198	1	176	433100	7,458			
199	1	176	433200	5,532			
200	1	177	433300	6,703			
201	1	170	433400	3,467			
202	1	177	433500	4,230			
203	1	177	433600	5,462			
204	1	178	433700 $\frac{1}{2}$	2,268 1134			
205	1	179	433800	5,092			
206	1	179	433900	3,891			
207	1	179	434000	3,202			

19-Aug-88 10:39 AM

A198: 1

READY

A	B	C	D	E	F	G	H
179	1	182	430400 $\frac{1}{2}$	2,135 1,067			
180	1	181	430500	4,807			
181	1	181	430600 $\frac{1}{2}$	5,434 2,717			
214		178	4357 $\frac{1}{3}$	1458	5,788		
215		501	4358 $\frac{1}{2}$	1458	4,602		

$= 120,150$

REFERENCE - 5

ATTACHMENT 9

ABANDONED SITE PROGRAM DRIVE-BY RECORD

Site Name: STACFA CONTROL SYSTEM.Site Location: 2481. SAN LEANDRO BLVDSAN LEANDRO

Facility File Number: _____

1. Status a. Active ☐ b. Different Company ☐
Inactive ☒
2. Setting a. Urban ☒ b. Residential ☒ c. Near: RR tracks ☒
Suburban ☐ Commercial ☐ Drainage ☐
Rural ☐ Industrial ☒ Freeway ☒
Agricultural ☐ Other _____ Other _____
- d. Paved ☐ e. Restricted access ☐
Unpaved ☐ Unrestricted access ☐
Partially paved ☐
3. Waste a. Hazardous ☐ b. Liquid ☐ c. Undetermined ☐
Municipal/☐ Sludge ☐ None visible ☒
Garbage ☐ Solid ☐ Other _____
Inert ☐
4. Waste Containment a. Pond ☐ b. Drum/Bbl ☐ d. To: Ground ☐
Sump ☐ Pail/Can ☐ Paving ☐
Pit ☐ Trash can ☐ Drain ☐
Dumpster ☐ Other _____
Box/Pallet ☐
- c. Piled ☐ Bag/Sack ☐ Tanks ☐
Scattered ☐ Vehicle ☐ Others _____
5. Misc. a. Odors WOOD TREATMENT c. Vegetation NONE
PLANT GROW
b. Topography _____ d. Site observability _____
6. Estimate the number of people living and/or working in the immediate vicinity of the site.
7. Estimate the distance to food processing/packaging or agricultural production.
8. Any schools, hospitals, nursing homes, day care centers, or other "sensitive" populations within IN CLOSE VICINITY.

Abandoned Site Program Drive-by Record
Page 2

9. Proximity to sensitive environment/ecosystem 1 3/4 miles (SF Bay)

10. Map &
..... Comments

A graphic site description. In addition to above, draw, describe, and comment on the following: buildings, paving, storage (raw material and products), security, vacant areas, and housekeeping. Also identify streets, landmarks, directions, etc.

ONE SINGLE STORY BUILDING WITH A WAREHOUSE ADDITION.
PAVED WITH ASPHALT CONCRETE. NO SECURITY OR FENCE.
LOCATED ON A BUSY INTERSECTION OF TWO MAJOR STREETS
SAN LEANDRO BLVD AND WASHINGTON AVENUE. THE SITE
IS INACTIVE BUT REASONABLY CLEAN. THERE IS A SIGN
SHOWING HUMANA HOSPITAL ONLY 3/10 MILE AWAY.

Name: ARUN K. ROY

Date: 4/1/88

REFERENCE 7